Distr.
RESTRICTED

LC/R.675
2 August 1988

ORIGINAL: ENGLISH

E C L A C

Economic Commission for Latin America and the Caribbean

WATER SUPPLY AND SANITATION FOR THE POOR: THE ACHIEVEMENTS OF THE INTERNATIONAL DRINKING WATER SUPPLY AND SANITATION DECADE IN LATIN AMERICA AND THE CARIBBEAN

*/ This document has been prepared by the Water Resources Unit, Division of Natural Resources and Energy, Economic Commission for Latin America and the Caribbean, for the Seminar on Water Supply and Sanitation for Low-Income Populations in Rural and Periurban Areas to be held in Olinda, Pernambuco, Brazil, 29 September-5 October 1988.

88-8-1046

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1. Introduction

At the beginning of the International Water Drinking Water Supply and Sanitation Decade, Latin America and the Caribbean were relatively well provided with water supply and sanitation facilities compared with the other regions of the developing world. Nevertheless, many millions of the citizens of the countries of the region remained without a protected source of drinking water and even more suffered the absence of safe and decent facilities for the disposition of excreta. This was especially true for the low income population in both urban and rural areas. The programmes developed under the Alliance for Progress and continued in the 1970's were largely directed towards the provision of urban supply and to the delivery of water and sewerage services by traditional means.

It can justifiably be claimed that this conventional technology centred around large piped systems served the region well. The reduction in the expansion of service in more recent years in most countries of the region raises questions, however, about the nature of the policies being applied. There is a need to reconsider the approach being taken and, perhaps, to introduce innovations in the means of delivery of drinking water supply and services.

This paper critically examines the recent behavior of the sector within the context of the goals of the International Drinking Water Supply and Sanitation Decade (IDWSSD). Consideration is given to the achievements of the sector and to its failures. Specifically, attention is drawn to the needs of the poor rural and peri-urban populations. The satisfaction of the needs of the poor is discussed with reference to the wider social and economic problems facing the region, particularly the recession and the accompanying problem of capital shortage.

(a) The situation at the beginning of the decade

By 1980, relatively well organized water supply and sanitation institutions were operating in most of the countries of the region. Usually, these institutions were organized within the central government with responsibility for both drinking water supply and sanitation. There were exceptions as in Brazil where the institutions were organized within the states and in Colombia where the municipalities continue to be the most important providers of water supply and sanitation services. It was characteristic everywhere, however, that the institutions primarily directed their efforts towards the satisfaction of the needs of the urban population through the use high capital cost centralized water supply and sewerage systems

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In the urban areas of most countries of the region high levels of service had been achieved, particularly in water supply where 71 percent of the population were served with house connections (Table 1). The situation was not, however, so satisfactory in the provision of sewerage, only 59 percent of the urban population with service, although perhaps the data understates the real existence of adequate individual excreta disposal systems. In rural areas less progress had been made, although again, in the larger rural settlements in many parts of the region piped drinking water supply systems were being installed. There were still, however, many rural people without a safe source of drinking water or sanitary excreta disposal facilities. Moreover, very few countries had any institutional support for providing services to this part of their population.

The provision of service in 1980 varied considerably among the countries of the region with the highest levels in the smaller countries of Central America and the Caribbean. Not surprisingly, the provision of services remained lowest in those countries with a higher proportion of rural population and lower incomes, Haiti, Paraguay, Bolivia and Nicaragua. Only in the islands of the Caribbean were high levels of service to be found for the rural population.

(b) The targets of the Decade

By 1980, the majority of the countries of the region had set national targets for the Decade. These targets have been adjusted since then mainly to reflect the impact of the generally negative overall economic climate. The targets remain ambitious, however, even if falling short of the original goal set at the time of the Mar del Plata conference.

to provide all people with water of safe quality in adequate quantity and basic sanitary facilities by 1990, according priority to the poor and less privileged.1

The different targets for the Decade adopted by the countries of Latin America and the Caribbean can be summarized as follows,

(i) The provision of safe drinking water to 91% of the urban population - 89% to be served through house connections;

(ii) The provision of safe drinking water to 56% of the rural population;

(iii) The provision of sewerage or other excreta disposal services to 69% of the urban population;

Table 1
LATIN AMERICA AND THE CARIBBEAN, PROVISION OF WATER SUPPLY & SANITATION, 1980

	WATER SUPPLY															SEWERAGE AND SANITATION					
	Total Population served*					Urban Population						Rural Population									
Country	Total Population	House Connection	Easy Access	Total Served	%	Total Population	House Connection	%	Easy Access	%	Total Served	%	Total Population	Total Served	%	Total Served	%	Urban Served	%	Rural Served	%
Argentina	27.94	13.38	1.44	14.82	53	23.19	13.38	58	0.65	3	14.03	61	4.75	0.79	17	20.21	72	18.56	80	1.65	35
Bahamas	0.22	0.11	0.02	0.13	59	0.14	0.11	79	0.02	14	0.13	93	0.08	-	0	0.12	55	0.12	86	-	-
Barbados	0.24	0.08	0.16	0.24	100	0.08	0.08	100	0.00	0	0.08	100	0.17	0.16	94	-	100	-	-	-	-
Belice	0.15	0.05	0.05	0.10	67	0.07	0.05	71	0.03	43	0.08	114	0.07	0.03	43	0.10	67	0.05	71	0.06	86
Bolivia	5.60	0.60	1.45	2.05	37	2.49	0.60	24	1.13	45	1.73	69	3.11	0.32	10	1.04	19	0.92	37	0.12	4
Brazil	119.10	64.61	22.00	86.61	73	80.48	64.61	80	2.40	3	67.01	83	38.62	19.60	51	26.30	22	25.91	32	0.39	1
Colombia	27.00	11.84	11.27	23.11	86	17.28	11.84	69	4.16	24	16.00	93	9.72	7.11	73	16.37	61	16.00	93	0.37	4
Costa Rica	2.22	1.30	0.76	2.06	93	1.33	1.30	98	0.03	2	1.33	100	0.89	0.73	82	2.07	93	1.32	99	0.75	84
Chile	11.20	8.42	1.01	9.43	84	9.07	8.42	93	0.65	7	9.07	100	2.13	0.36	17	9.24	83	9.03	100	0.21	10
Dominican Rep	5.43	1.84	1.59	3.23	59	2.75	1.84	60	0.69	25	2.53	95	2.68	0.90	34	0.80	15	0.69	25	0.11	4
Ecuador	8.12	2.77	1.10	3.87	48	3.82	2.77	73	0.25	7	3.02	79	4.30	0.85	20	3.54	44	2.80	73	0.74	17
El Salvador	4.54	1.17	1.16	2.33	51	1.90	1.17	62	0.11	6	1.28	67	2.64	1.05	40	1.60	35	0.91	48	0.69	26
Guatemala	7.26	1.38	1.86	3.24	45	2.69	1.38	51	1.03	38	2.41	90	4.57	0.83	18	2.14	29	1.22	45	0.92	20
Guyana	0.79	0.35	0.28	0.63	80	0.39	0.35	90	0.04	10	0.39	100	0.40	0.24	60	0.61	77	0.28	72	0.32	80
Haiti	4.91	0.33	0.56	0.89	18	1.20	0.33	28	0.28	23	0.61	51	3.71	0.28	8	0.87	18	0.50	42	0.37	10
Honduras	3.75	0.70	1.52	2.22	59	1.36	0.70	51	0.56	41	1.26	93	2.39	0.96	40	1.29	34	0.67	49	0.62	26
Jamaica	2.25	0.62	0.51	1.13	50	1.13	0.62	55	0.00	0	0.62	55	1.12	0.51	46	0.15	7	0.13	12	0.02	2
Mexico	70.12	28.39	22.76	51.15	73	45.79	28.39	62	13.03	28	41.42	90	24.33	9.73	40	38.37	55	35.45	77	2.92	12
Nicaragua	2.73	0.97	0.08	1.05	38	1.46	0.97	66	0.01	1	0.98	67	1.27	0.07	6	0.50	18	0.50	34	-	-
Panama	1.92	0.84	0.72	1.56	81	0.94	0.84	89	0.11	12	0.95	101	0.98	0.61	62	1.36	71	0.78	83	0.58	59
Paraguay	3.06	0.45	0.17	0.62	20	1.15	0.45	39	0.00	0	0.45	39	1.91	0.17	9	2.61	85	1.09	95	1.52	80
Peru	16.02	5.82	2.31	8.13	48	10.21	5.82	57	1.10	11	6.92	68	6.61	1.21	18	5.88	35	5.88	57	0.02	0
Surinama	0.35	0.09	0.22	0.31	89	0.10	0.09	90	0.01	10	0.10	100	0.25	0.20	80	0.30	86	0.10	100	0.20	80
Trinidad	1.10	0.55	0.52	1.07	97	0.70	0.55	79	0.15	21	0.70	100	0.40	0.37	93	1.02	93	0.67	96	0.35	88
Uruguay	2.94	2.19	0.17	2.36	80	2.44	2.19	90	0.16	7	2.35	96	0.50	0.01	2	1.47	50	1.44	59	0.03	6
Venezuela	15.02	9.80	2.87	12.67	84	11.89	9.80	82	1.20	10	11.00	93	3.13	1.67	53	7.47	50	7.09	60	0.38	12
TOTAL	344.76	158.45	76.56	235.01	68	224.05	158.45	71	27.60	12	186.25	83	120.73	48.76	40	145.43	42	132.09	59	13.34	11

Source: PAHO

*Population in millions

(iv) The provision of means for the sanitary disposition of excreta to 31% of the rural population.[2]

The Pan American Health Organization has estimated that the achievement of these targets implies the need to provide water supplies to 99 million people in urban areas and 21 million in rural areas. Some 85 million uçrban dwellers and 26 million rural must be provided with sanitation.[3]

It was estimated in 1985, again by PAHO, that the total investment required during the remainder of the Decade in order to reach the national targets would be some 30 billion united states dollars. In addition, however, considerable sums will be required for the maintenance of the existing systems. The cost of maintenance of existing systems probably lies between US$2 billion and US$8 billion a year. Taking new investment and maintenance requirements together, there is an additional demand of from US$40 to US$70 billion for the sector in the rest of the Decade.

(c) The financial restraint

At the beginning of the Decade, it was obvious that, for many countries in the region, the achievements of the goals of the Decade and even of the specific national targets would be very dependent on the financial resources made available. The very existence of the Decade implied a reconsideration of the priority given water supply and sanitation investments even beyond that already given during the 1960's and 1970's.

It was estimated that, for the region as a whole, the level of investment required, using conventional technology, to achieve the targets set for the Decade by the countries in 1980 was some one and half to two half times the level achieved between 1970 and 1977.[4] In some, mainly poorer, countries it would be very much higher. Such increases in the amount of investment, it was hazarded, could be achieved in most countries of the region if the target was other than complete coverage.[5] There would be exceptions, however, particularly among the smaller and poorer countries.

Moreover, it was concluded that the bulk of the required financing would have to be found within the countries themselves. It could not be expected that external sources of finance would provide more than a small amount of the capital required. At the end of the seventies the external contribution to the sector was equivalent to only 8% of the total and this contribution was heavily concentrated in the larger countries of the region and in urban areas.

2. The achievements so far

The progress made in increased coverage and other investments in water supply and sanitation, although substantial in a few countries, has been less during the first half of the Decade than was expected for the region as a whole (Table 2). The increases in coverage that have been obtained are far from sufficient to meet the targets set for 1990. This is particularly so in those areas of coverage which most affect the poor, the expansion of sanitation both urban and rural (Figure 1), and rural drinking water supply (Figure 2).

(a) The reasons for the lack of progress

The reasons for the lackluster performance of the sector and failure to meet the targets set in 1980 arise from various causes. Some are specific to the particular circumstances of the 1980's while others are longer term weaknesses of the organization of the provision of water supply and sanitation in the region. For example, it has long been recognized that there is a dearth of properly trained personnel and a need to strengthen the institutions of the sector. At the same time the financing of water supply and sanitation remains too dependent on sources external to the sector, itself. It is clear that the bulk of financing will have to be met from the proceeds from providing services. Unfortunately, few water supply and sanitation utilities have adequate tariff structures.

The impact of the failure of the provision of services to expand in line with the targets established at the beginning of the Decade has been compounded by the fact that full use is not made of existing facilities. There are too many examples in the region of a serious neglect of maintenance which leads to poor functioning and repeated breakdowns. Particularly important, in this respect, is the widespread failure to control losses from distribution systems.

(b) The significance of the negative economic climate

The decade of the 1980's began well for Latin America. Incomes reached their highest levels ever in 1980 and 1981. These peaks were followed by severe falls in economic activity and, in consequence, in levels of income (Table 3). Many countries of the region have yet to recuperate from this recession, the most serious since the 1930's. A serious effect of the recession has been the reduction in most countries of the rates of investment. Levels of investment have fallen more than

Table 2
LATIN AMERICA AND THE CARIBBEAN, PROVISION OF WATER SUPPLY & SANITATION, 1985

	WATER SUPPLY															SEWERAGE AND SANITATION					
	Total Population served*					Urban *						Rural *									
Country	Total Population	House Connection	Easy Access	Total Served	%	Urban Population	House Connection	%	Easy Access	%	Total Served	%	Total Population	Total Served	%	Total Served	%	Urban Served	%	Rural Served	%
Argentina	30.57	15.60	1.26	16.86	55	25.57	15.60	61	0.40	2	16.00	63	5.00	0.86	17	21.05	69	19.30	75	1.75	35
Bahamas	0.23	0.12	0.03	0.15	65	0.15	0.12	80	0.03	20	0.15	100	0.08	-	0	0.15	65	0.15	100	-	-
Barbados	0.25	0.08	0.17	0.25	100	0.09	0.08	100	0.00	0	0.09	100	0.16	0.16	100	0.10	100	0.10	111	-	-
Belice	0.16	0.06	0.05	0.11	69	0.07	0.06	86	0.02	29	0.08	-	0.09	0.02	22	0.10	63	0.06	86	0.04	44
Bolivia	6.43	2.11	0.64	2.75	43	3.07	2.11	69	0.20	7	2.31	75	3.36	0.44	13	1.34	21	1.02	33	0.32	10
Brazil	134.46	79.90	23.54	103.44	77	97.40	79.90	82	2.91	3	82.81	85	37.06	20.63	56	32.50	24	32.10	33	0.40	1
Colombia	27.50	13.97	11.22	25.19	92	18.10	13.97	77	4.11	23	18.08	100	9.40	7.11	76	18.59	68	17.34	96	1.25	13
Costa Rica	2.46	1.45	0.84	2.29	93	1.48	1.45	98	0.03	2	1.48	100	0.98	0.81	83	2.34	95	1.47	99	0.87	89
Chile	12.17	9.54	0.99	10.53	87	10.19	9.54	94	0.41	4	9.95	98	1.98	0.58	29	10.27	84	10.19	100	0.08	4
Dominican Rep	5.96	1.82	1.85	3.67	62	3.28	1.82	55	0.96	29	2.78	85	2.68	0.89	33	1.60	27	1.34	41	0.26	10
Ecuador	9.38	3.71	1.63	5.34	57	4.68	3.71	76	0.22	5	3.93	81	4.50	1.41	31	6.08	65	4.76	98	1.32	29
El Salvador	4.77	1.51	1.07	2.58	54	2.38	1.51	63	0.11	5	1.62	68	2.39	0.96	40	2.97	62	1.94	82	1.03	43
Guatemala	7.96	1.83	1.04	2.87	36	2.98	1.83	61	0.33	11	2.16	72	4.98	0.71	14	1.82	23	1.22	41	0.60	12
Guyana	0.82	0.37	0.31	0.68	83	0.40	0.37	93	0.04	10	0.41	103	0.42	0.27	64	0.73	89	0.40	100	0.33	79
Haiti	5.27	0.45	1.55	2.00	38	1.41	0.45	32	0.36	27	0.83	59	3.86	1.17	30	1.10	21	0.59	42	0.51	13
Honduras	4.07	0.55	1.45	2.00	49	1.44	0.55	38	0.26	18	0.81	56	2.63	1.19	45	1.25	31	0.35	24	0.90	34
Jamaica	2.10	0.99	1.03	2.02	96	1.10	0.99	90	0.10	9	1.09	99	1.00	0.93	93	1.91	91	1.01	92	0.90	90
Mexico	79.24	37.45	28.08	65.53	83	54.24	37.45	69	16.23	30	53.68	99	25.00	11.85	47	44.86	57	41.70	77	3.16	13
Nicaragua	3.27	1.30	0.27	1.57	48	1.87	1.30	70	0.12	6	1.42	76	1.40	0.15	11	0.88	27	0.65	35	0.23	16
Panama	2.14	1.04	0.72	1.76	82	1.09	1.04	95	0.05	5	1.09	100	1.05	0.67	64	0.72	34	1.08	98	0.64	61
Paraguay	3.35	0.59	0.21	0.80	24	1.18	0.59	50	0.03	3	0.62	53	2.17	0.18	8	2.85	85	1.05	89	1.80	63
Peru	19.70	7.62	2.73	10.35	53	12.85	7.62	61	1.53	12	9.15	73	7.15	1.20	17	9.29	47	8.40	87	0.89	12
Suriname	0.50	0.24	0.15	0.39	78	0.34	0.24	71	0.00	0	0.24	71	0.16	0.15	94	0.28	56	0.27	79	0.08	50
Trinidad	1.76	0.67	0.48	1.15	65	0.80	0.67	84	0.13	16	0.80	100	0.38	0.36	95	1.16	66	0.80	100	0.36	95
Uruguay	2.97	2.19	0.28	2.47	83	2.46	2.19	89	0.14	6	2.33	95	0.51	0.14	27	1.74	59	1.44	59	0.30	59
Venezuela	16.47	11.25	3.09	14.34	87	12.75	11.25	88	0.66	5	11.91	95	3.72	2.43	65	7.47	45	7.27	57	0.20	5
TOTAL	365.96	198.41	84.68	281.09	75	261.27	198.42	75	20.40	11	225.82	86	122.13	55.27	45	173.15	45	156.00	60	18.22	15

Source: PAHO

*Population in millions

Figure 1
CHANGE IN TOTAL WATER SUPPLY COVERAGE, 1980-1985

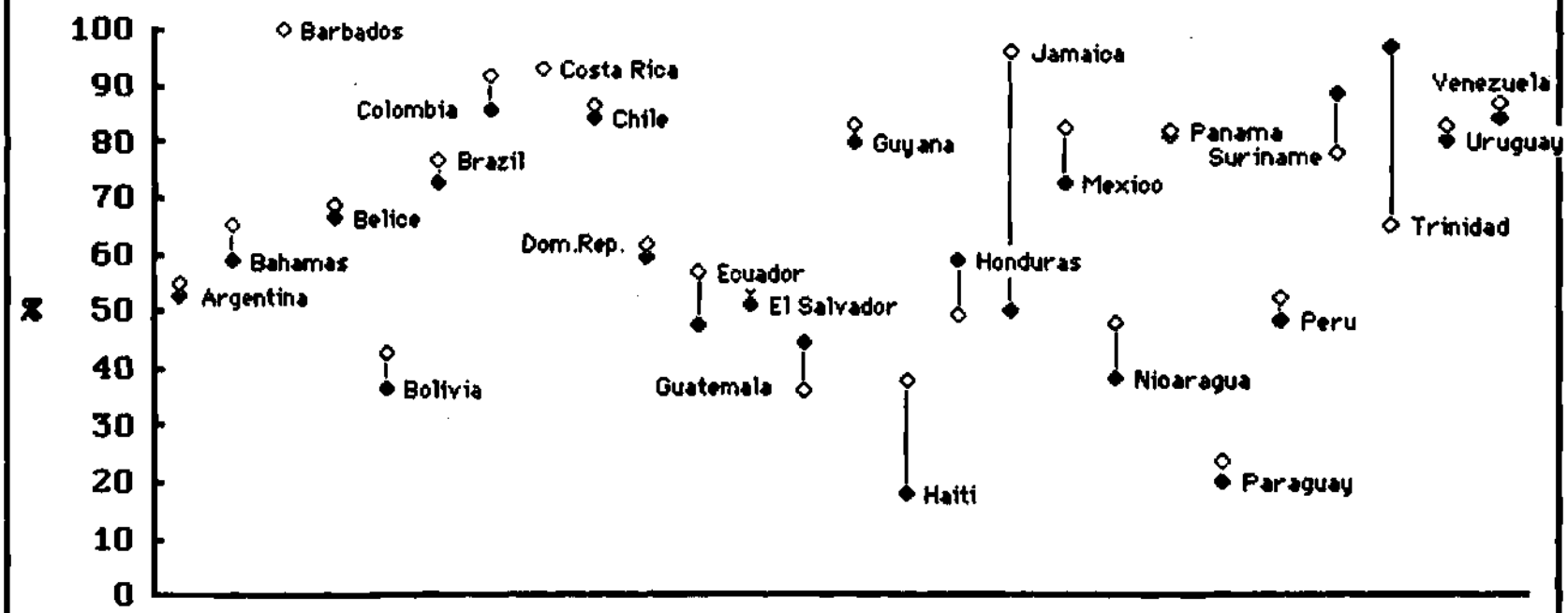
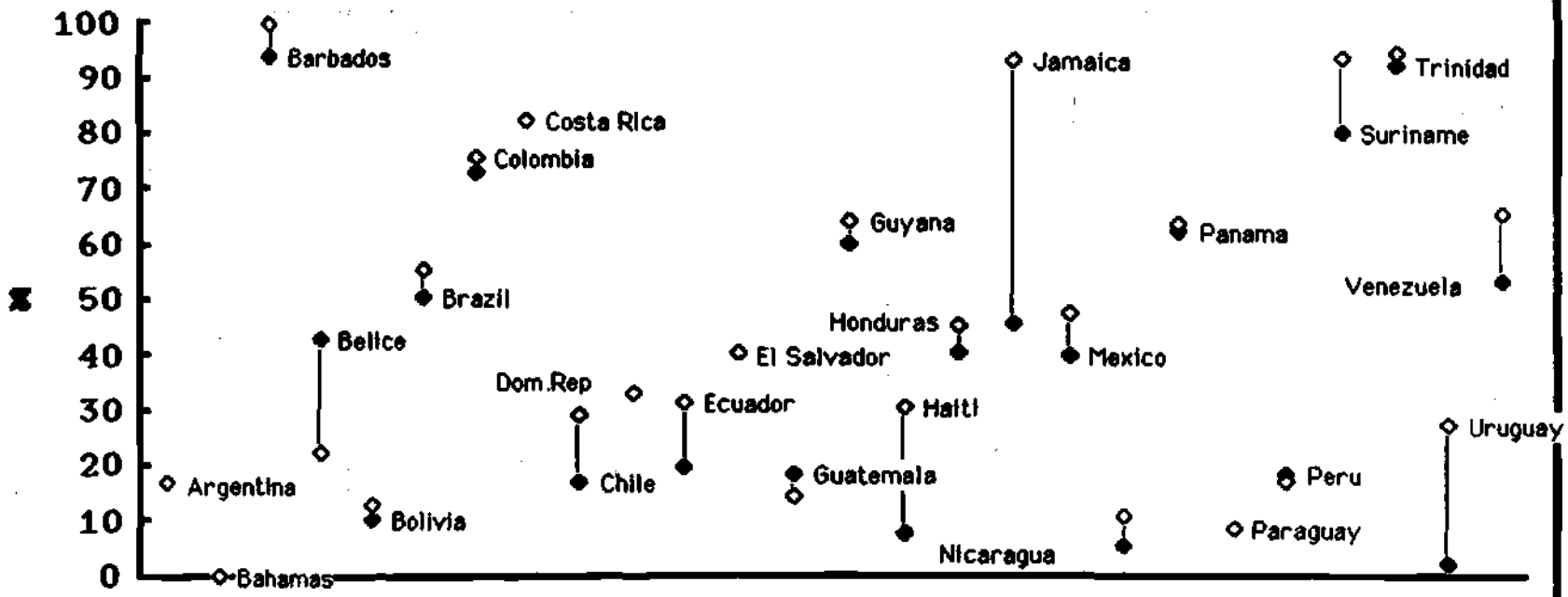


Figure 2
CHANGE IN RURAL WATER SUPPLY COVERAGE, 1980-1985



proportionate with the decline in gross domestic product at the beginning of the decade. Moreover, levels of investment have remained low in many countries (Table 4). This fall in the level of investment is one of the consequences of the large transfers of resources involved in the payment of interest on the external debt.

Table 3
PER CAPITA GROSS DOMESTIC PRODUCT, AT CONSTANT MARKET PRICES[a]

	Dollars at 1980 prices									
Country	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987[b]
Argentina	2694	2848	**2951**	2700	2519	2542	2565	2412	2523	2549
Barbados	2726	2697	**3340**	3249	3057	3033	3120	3123	3275	3239
Bolivia	686	**785**	766	749	708	645	622	595	562	556
Brazil	1312	1639	2056	1941	1915	1827	1889	2001	2119	**2140**
Colombia	925	1090	1265	1266	1251	1248	1268	1288	1335	**1376**
Costa Rica	1205	1409	**1557**	1476	1328	1324	1388	1362	1383	1386
Chile	2129	1777	2324	**2405**	2055	2010	2095	2110	2187	2266
Ecuador	758	1206	1421	**1432**	1407	1350	1375	1401	1404	1323
El Salvador	722	**824**	775	702	656	654	663	666	661	664
Guatemala	856	978	**1128**	1107	1040	984	957	925	900	896
Guyana	658	713	616	600	524	461	479	479	...	
Haití	180	196	**235**	225	213	211	208	205	203	202
Honduras	548	561	**667**	650	615	592	584	575	566	572
Jamaica	**1601**	1567	1216	1226	1207	1205	1188	1112	1120	1159
México	1807	2099	2538	**2694**	2612	2443	2473	2478	2327	2299
Nicaragua	977	**1068**	750	702	656	654	663	666	661	650
Panamá	1378	1498	1766	1797	**1844**	1804	1758	1791	1806	1797
Paraguay	767	951	1318	**1388**	1333	1253	1253	1263	1222	1237
Perú	1066	1181	1190	**1210**	1182	1016	1038	1035	1090	1139
Rep.Dominicana	756	1021	1141	1158	1145	**1174**	1150	1098	1093	1143
Trinidad&Tobago	3392	4175	**5390**	5349	5320	4757	4398	4215	...	...
Uruguay	1790	1990	2415	**2434**	2174	2028	1989	1970	2085	2187
Venezuela	**4695**	3598	3377	3243	3112	2861	2742	2648	2716	2686
Average	1518	1761	**2045**	2012	1944	1852	1878	1901	1928	1937

Source: ECLAC

[a] Figures in bold indicate peak levels of per capita income

[b] Preliminary estimate

It can be expected that the fall in the overall level of investment, by upto half compared with the peaks years at the beginning of the 1980's in many countries, has been felt in the water supply and sanitation sector. Moreover, it can be anticipated that the impact of lower capital investment has not only affected the expansion of water

supply and sewerage networks, but also the maintenance of existing systems. Unfortunately, precise information on the effects of the recession on the levels of investment in the sector are not available, but the impact can be seen in the slowing down of the impetus of expansion in the population served that had been achieved in the 1970's. PAHO has estimated, on the basis of the provision of counterpart funds to the loans of the InterAmerican Development Bank and the World Bank, that there was an overall investment shortfall in the first half of the Decade of some US$4.5 billion if the original national targets are to be met.[6]

3. The poor and the Decade

The relatively poor performance of the sector raises fears that the lower income groups of the population, the poor, have borne the brunt of the loss. The poor form a large proportion of the population of the majority of the countries of the region and have been in general the major sufferers from the recession of the 1980's.

(a) Who are the poor?

Estimating the number of poor people is not easy. It is obvious that large numbers of the population of Latin America and the Caribbean are poor, even destitute. To go, however, from this qualitative statement to a more precise estimate of the size and distribution of the poor has rarely been done. There is in fact only one regional study using comparative data and this study only provides information for around 1970.[7] In this study, it is estimated that approximately 40 percent of the population of Latin America is poor in an absolute sense (Table 4). This proportion of the population are incapable of satisfying their basic needs for food, shelter, clothing, health, education etc.,[8] Some 20 percent of the population were estimated to be destitute, that is unable even to buy a minimum basket of foods.

Altimir could only provide estimates, however, for a small group of countries (Table 4). The countries included in the study accounted, however, for more than 82 percent of the total population of the region, some 231 millions. The incidence of poverty shown by the study is depressing, particularly in those countries where half or more of the population were unable to satisfy their basic needs, reaching even 65 percent of the whole population of Honduras.

Does the situation revealed by Altimir still exist almost twenty years later? The answer would seem, unfortunately, to be, yes The situation may be worse as there are indications that the distribution of income has worsened with the recession of the 1980's as per capita incomes have declined and unemployment increased. In many countries

per capita incomes are little or no higher than they were in the 1970's (Table 3). In Argentina, Bolivia, El Salvador, Guyana, Jamaica, Nicaragua and Venezuela per capita incomes in 1986 were actually below the level of 1970.

Table 4:
SELECTED COUNTRIES: ESTIMATES OF THE INCIDENCE OF POVERTY AROUND 1970

	% of households below the poverty line			% of households below the destitution line		
	Urban	Rural	Total	Urban	Rural	Total
Argentina	5	19	8	1	1	1
Brazil	35	73	49	15	42	25
Colombia	38	54	45	14	23	18
Costa Rica	15	30	24	5	7	6
Chile	12	25	17	3	11	6
Honduras	40	75	65	15	57	45
Mexico	20	49	34	6	18	12
Peru	28	68	50	8	39	25
Uruguay	10	-----	-----	4	-----	-----
Venezuela	20	36	25	6	19	10
Latin America	26	62	40	10	34	19

Source: Altimir

There is, in addition, more direct evidence that the distribution of income generally worsened during the 1970's and that the subsequent recession would only have strengthened this trend. For example in Argentina the share of the poorest half of the population has declined from 25.1 percent to 21 percent of total income between 1970 and 1981. In none of the 6 countries for which such data is available for the two periods was there any improvement in the distribution of income over the last decade.

Moreover, it is the case that in many countries, the adjustment process is far from complete. It can be expected that incomes will decline further, and the distribution become more regressive, with any

increase in the levels of unemployment caused through changes in economic structure.

(b) Where do the poor live?

There is a lack of specific information for the region as a whole on the rural-urban distribution of poverty. In general, however it can be stated that the majority of the lowest income groups are urban dwellers, although the poorest people are to be found living in the countryside. This assertion is supported by various partial studies. For example, two recent studies in Central America illustrate one of the major differences between rural and urban levels of living even in poorer countries.[9] In Guatemala, 85 percent of the population with the highest rates of infant mortality, more than 120 deaths per 1000 children under two years old, live in rural areas, compared with 15 percent in urban areas and none in Guatemala City. In Honduras, a higher proportion of urban population in a region is not only associated with a lower rate of infant mortality, but was also accompanied by a more rapid decline in the death rate between 1960 and 1980 (Table 5).

Table 5
REGIONAL VARIATIONS IN INFANT MORTALITY,
HONDURAS, 1980

Region	% Urban Population	Infant Mortalility	% Decline 1960-1980
Occidental	11.0	102	33
Norte	49.6	82	39
Centro	28.5	91	33
CentroSur	58.9	63	48
Sur	22.6	84	37
SurOriental	14.9	81	27
NorOriental	32.0	87	31
Oriental	...	75	32

Source: CELADE

In general in Latin America and the Caribbean, traditionally the poor have been more concentrated in rural areas. The rural population has been not only poorer than the urban, but the distribution of income

has been more unequal.[10] The rise in unemployment accompanying the recession has largely been an urban phenomenon and has increased, to an unknown degree, the numbers of urban poor. The poorest groups within the population are still found in rural areas. One caveat must be made, in those countries with a lower incidence of overall poverty the lot of therural poor maybe be considerably ameliorated due to their own food production.

(c) Have the poor benefited from the Decade so far?

It is not readily evident that the poor have benefited in any general or particular way from the water supply and sanitation programmes executed so far during the Decade. The statistics on the growth of coverage show only a marginal increase in the provision of services to the rural population even in drinking water supply. Moreover, much of the increase is to that portion of the rural population living in larger villages. In urban areas specific statistics on the provision of water supply and sewerage to the poor are not available, but the small expansion in the number of urban households with house connections for either water supply or sewerge would suggest that the poor have not clearly been provided with improved facilities.

There is much sporadic and indirect evidence that would support such a conclusion. The continuance of very high rates of infant mortality, and the dramatic reductions achieved in a few countries, particularly Chile, Cost Rica and Cuba,[11] the few and isolated examples that can be cited of innovative supply practices,[12] the absence of significant change in the sector in recent years etc. all suggest a failure to reach out to the poorer sections of the population.

Moreover in general, it is a reasonable assumption that in countries with half or more of the population living in poverty that it is theses poor households that are without drinking water and sanitation services. The higher income groups, given their levels of absolute income, can satisfy their own needs should the public services fail to do so. As the public service does fail to do so then the poor remain without service.

4. What can be done?

It is clear that if current tendencies continue the national targets set at the beginning of the Decade will not be met. It is equally clear that the conventional approach to the provision of drinking water supply and sanitation will not achieve adequate water supply and sanitation for the poor. There is a need to seriously consider what can be done both to increase the rhythm of expansion of service, especially

to the lower income groups, and to put the sector in a situation where it is less dependent on the ups and downs of the economy as a whole and of the public sector, in particular.

There appear to be four areas, sector administration, system management, tariffs, and technology where innovation is needed. It is not meant to imply, in such a short review, that it is possible to arrive at definitive proposals for the reform. Rather, these proposals are meant as factors that need to be taken into account in any effort to improve the provision of service to the poor. The specific requirements of change in each area go beyond the possibilities of the present paper, but it is suggested that the following changes are needed,

(i) Greater administrative decentralization;
(ii) More businesslike system management;
(iii) The adoption of a tariff structure that will permit the generation of revenues to cover capital as well as operation and maintenance costs;
(iv) The wider use of cost-minimizing technology.

It is not suggested that any of these proposals are new. They have been made before and there exist examples of the application of such changes in different countries. Rather they are reiterated here to remind us that the achievement of change is a complex process and requires multiple innovations. We are here to discuss only some aspects of drinking water supply and sanitation, particularly the possibilities for the use of certain low cost technologies for the better provision of drinking water and sanitation to the poor. Such innovations, as necessary as they are, will not, nor cannot, of themselves, produce better service unless accompanied by change in the other three areas mentioned. Technology has to be used in an appropriate environment and such an environment does not widely exist in Latin America and the Caribbean at the moment. Perhaps this seminar can mark the beginning of the creation of a more propitious environment and the redirection of the sector towards the satisfaction of the needs of all the people of the region.

5. Conclusions

The conclusions that can be drawn from this short review of the current state of the drinking water supply and sanitation sector halfway through the International Drinking Water Supply and Sanitation Decade are the following:

(i) Investment in drinking water supply and sanitation in most countries of the region has been seriously reduced by the general economic recession prevailing in Latin America and the Caribbean since

1981;

(ii) The effect of the reduced resources available to the sector has been to curtail both the expansion of services and the maintenance of existing systems;

(iii) The impact of the reduction of resources has been felt most severely by lower income groups;

(iv) There is an urgent need, therefore, to develop specific programmes to improve services to lower income groups;

(v) These special programmes should be built around cost minimizing technology so as to liberate them, as far as possible, from dependence on resources external to the sector.

Notes

[1] United Nations, Report on the United Nations Conference on Water, Mar del Plata, 14-25 March, 1977, New York, p.

[2] Pan American Health Organization-World Health Organization, Environmental Health Programme, International Drinking Water Supply and Sanitation Decade, Regional Progress Report, Environmental Health Series No.6, Washington, 1987, p.5.

[3] ibid

[4] United Nations, Economic Commission for Latin America and the Caribbean, Drinking Water Supply and Sanitation in Latin America, 1981-1990, Estudios e Informes de la Cepal, No.25, p.91.

[5] ibid

[6] PAHO, op.cit, p.7.

[7] Oscar Altimir, The Extent of Poverty in Latin America, World Bank Staff Working Papers, Number 522, Washington, 1982, 111pp.

[8] The definition of poverty was based on the ability to purchase a minimum basket of food. A seperate basket was defined for each country included in the study. The proportion of the population whose income did not permit the purchasing of twice the basket was declared to be poor. Those who could not even purchase the basket were declared destitute.

[9] United Nations, CELADE, Guatemala: Diferencias socioeconómicas de la mortalidad de los menores de dos años, 1968-1976, Santiago de Chile, 1984, and United Nations, CELADE, Honduras

[10] Altimir, Op.cit, p.85

[11] See, José Miguel Guzmán and Hernan Orellana, "Mortalidad infantil, neonatal y posneonatal en algunos paises de America Latina", Notas de Población, No.44, August, 1987, pp.31-66 for an analysis of the reductions achieved.

[12] See the discussion for example in, Tim Campbell, "Water Supply and Waste Disposal to Low-Income Urban Settlements in Latin America and the Caribbean",

paper presented at the Regional Symposium on Drinking Water Supply Sanitary Disposal of Excreta in Urban Slum Areas, Santiago, Chile, November 5-9, 1984.