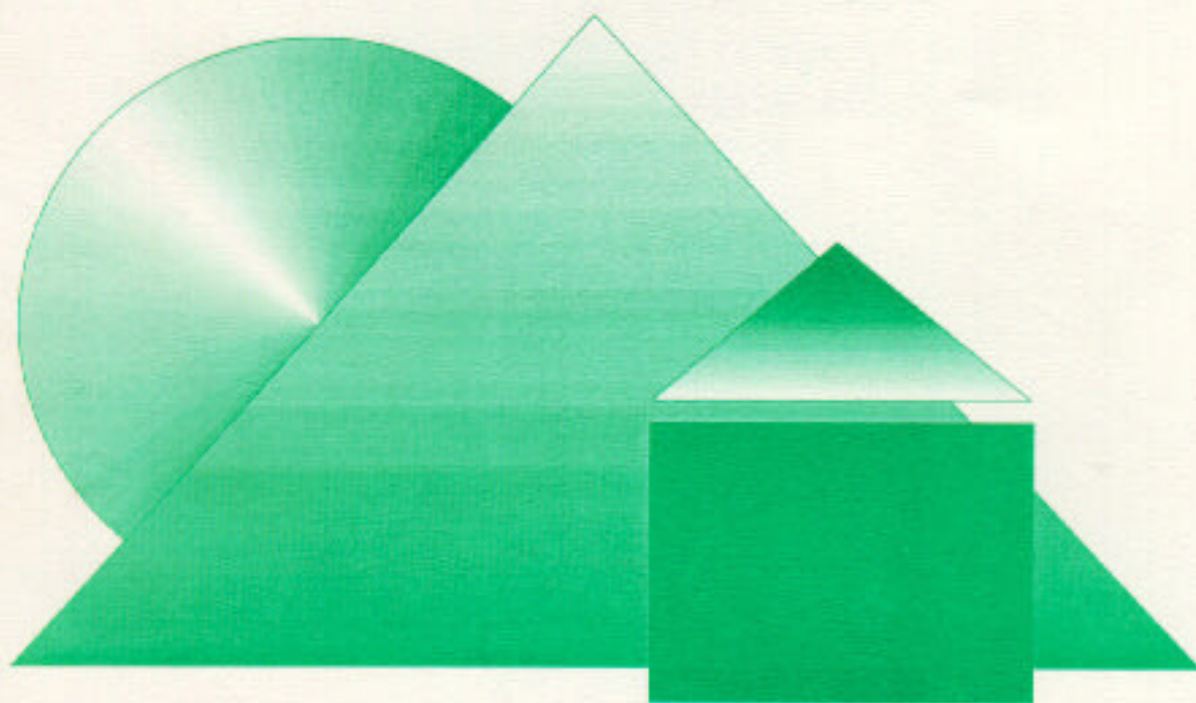


ECONOMIC COMMISSION FOR LATIN AMERICA AND THE CARIBBEAN

**SERIE MEDIO AMBIENTE Y DESARROLLO 7**

**SUSTAINABLE DEVELOPMENT OF  
HUMAN SETTLEMENTS:**  
**Achievements and challenges in housing and  
urban policy in Latin America and the Caribbean**

**Joan Mac Donald  
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ECONOMIC COMMISSION FOR LATIN AMERICA AND THE CARIBBEAN  
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This document was prepared by Ms. Joan Mac Donald and Mr. Francisco Otava, consultants, in collaboration with Ms. Daniela Simioni, Environmental Affairs Officer, and Ms. Michiko Komorizono, Associate Environmental Affairs Officer of ECLAC Division of Environment and Development. This document has been reproduced without formal editing. The views expressed herein are those of the authors and do not necessarily reflect the views of the Organization.

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## ABSTRACT

One year and a half after the United Nations Conference on Human Settlements (Habitat II) held in Istanbul, the present document aims to assess the progress made on the implementation of the Regional Plan of Action on Human Settlements for Latin America and the Caribbean.

The region faces a disturbing upsurge in urban poverty and widening income inequality, notwithstanding the slower rate of population growth. A worsening of environmental problems such as air and water pollution, waste disposal and vehicle congestion is being experienced in urban centres, and the region still has both quantitative and qualitative housing shortages, despite efforts made by governments.

The registered trend of reduced availability of public resources will continue in the future. The countries are implementing innovative changes in their systems to provide housing, urban services and infrastructure. The processes of decentralization and privatization opened up new spaces in the task of managing human settlements, such as the strengthening of municipal government and new integrated approaches involving participation of citizens and the private sector. The importance of environmental issues suggests that the efficiency in the management of human settlements will depend on the ability to embrace and complement the different aspects and levels that make up the real life of cities.

As early as 1992, the region, aware of these problems, initiated a dialogue on human settlements, which has since then been formalized in annual meetings of ministers and high-level authorities of the housing and urban development sector of Latin America and the Caribbean (MINURVI), and has been focused on attaining the sustainable development of human settlements and participating actively in achieving the goals set forth in Habitat II.

## INTRODUCTION

Among the features that have characterized the urban and housing situation in Latin America and the Caribbean in this decade, the most salient is the entrenchment of the planet. At the same time, in the 1990s this high level of urbanization has come to be accompanied by a drop in the rate of growth of the urban population, so that the big cities in particular are no longer growing as rapidly as they did in previous decades.<sup>1</sup>

Other tendencies that can be observed in the Region are a disturbing persistence of poverty and greater income concentration than in the past. Given that most of the poor are now city dwellers, it is in the cities that the region's poverty has come to be concentrated. Human settlement policies therefore have an important role to play in overcoming the inequalities that now exist, as they are a means for providing the lowest-income households with housing and urban services. Nonetheless, despite the efforts made in most of the countries to reduce the housing deficit that existed at the beginning of the 1990s, this has now worsened to the extent that it affects two out of every five households in Latin America. This can be explained on the one hand by an acceleration in the rate of increase in housing needs in most of the countries, notwithstanding the slower rate of population growth, and on the other hand by the slow pace at which housing production has recovered after the sharp drop of the 1980s.

Again, worsening environmental problems, such as air and water pollution and congestion, are being experienced in the urban centres of the region. It is anticipated that substantial resources will have to be mobilized over the coming years to resolve or forestall such problems, and to modernize the procedures, regulations and institutions involved in urban management so that due weight is given to the environmental aspect. A particular cause for concern in this respect is the continuing and still uncontrolled expansion of Latin American cities, with the adverse social, economic and environmental effects that this entails.

However, it is not only the negative aspects of Latin American cities that are being focused on today. In the current climate of economic openness and competitiveness, the role of cities as the spaces that house the main activities of production and technological innovation has been clearly identified. The political and social sectors are coming to realize that human settlements can contribute towards economic development as long as they are able to operate efficiently, overcome inadequacies in their infrastructure and provide conditions favourable to the formation of human capital.

In all likelihood the reduced availability of public resources which has been a feature of the housing and urban development sector since the 1980s will continue to be so in the future. Against this background, the countries are beginning to adjust their systems for providing and operating urban services and infrastructure so that a greater collaborative role can be played by the private sector in this area.

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<sup>1</sup> Urban population growth in the region fell from 2.4% a year in the period 1970-1980 to 1.8% between 1990 and 1995. In the Caribbean, the rate of population growth has fallen even more sharply, from 1.2% a year in the period 1970-1980 to 0.5% in the six years 1990-1995. This tendency is especially marked in major urban centres.

As well as opening up spaces for privatization in the work of managing cities and housing, there is also a need to promote greater participation by citizens in urban government, within the framework of the democratization processes that most of the countries have gone through during this decade. Historically, the institutional structures operating in the area of human settlements have tended to be centralized, and this has put difficulties in the way of accepting these challenges. As a result, the municipal governments of many cities have seen their position strengthened both politically and in institutional terms in the area of human settlements administration, in so far as they offer greater scope for social participation in the decision-making and activities involved in urban development and social housing.

Realizing that these and other special characteristics of the human settlement process in Latin America and the Caribbean strongly influence the nature of the challenges to be met in the urban and housing fields, governmental institutions in the sector initiated a dialogue on these issues at the beginning of the decade, and this was then strengthened by the activities undertaken in the region to prepare for the United Nations Conference on Human Settlements (Habitat II), held in Istanbul (1996). An average of some 25 countries attended the five Meetings of Ministers and High-level Authorities of the Housing and Urban Development Sector in Latin America and the Caribbean, held in Santiago, Chile (1992, 1995), Cartagena de Indias (1993), Quito (1994) and Kingston (1996). Thus, the views put forward by these regional forums in relation to human settlements can be taken as representative of the main concerns and priorities of the region as a whole.

The Regional Plan of Action,<sup>2</sup> in which the region's preparations for Habitat II culminated, is based on a concerted view of the above-mentioned characteristics of the human settlements process in the region. Its structure embraces five subject areas, for each one of which it lays down concrete measures to be adopted by the countries (box 1). After being presented in Istanbul, the Regional Plan of Action was ratified by the regional forum of High-level Authorities in 1996, and it was agreed to invite local authorities, non-governmental organizations, the private sector and national communities to collaborate in its implementation. In the following year, 1997, the VI Meeting of Ministers and High-level Authorities of the Housing and Urban Development Sector in Latin America and the Caribbean was held in San José, Costa Rica. In this meeting, the progresses of each country with respect to the Regional Plan of Action was reviewed and evaluated. Moreover, participants decided on the follow up of the implementation of that plan.

In the above-mentioned VI meeting in San José, issues of strategic importance for the regions were discussed, such as natural disaster prevention and mitigation, the regulation of land use, the participation of civil society, urban services management, the role of the state in housing policy, and the encouragement of regional exchange of experiences and technical training in housing and urban management. Natural disaster management was added as a sixth point to the Regional Action Plan.

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<sup>2</sup> United Nations, Economic Commission for Latin America and the Caribbean: Regional Plan of Action on Human Settlements in Latin America and the Caribbean, Santiago, Chile, 1996.



Box 1

**THE LATIN AMERICAN AND CARIBBEAN REGIONAL PLAN OF ACTION ON HUMAN SETTLEMENTS**

The agreements adopted by the countries of the Region in order to achieve sustainable development in their human settlements fall into five subject areas:

- **achieving social equity and alleviating urban poverty**, for example by increasing the number of housing solutions so that they at least match the formation of new households; expanding programmes to provide sanitation, shelter, regularization of tenure and access to public infrastructure; establishing programmes to maintain and upgrade existing housing; moving towards subsidies that are transparent and effective; and promoting rural settlements and housing.
- **increasing the productivity of human settlements** to improve people's quality of life and opportunities for economic, social and environmental progress, developing the competitiveness and productive potential of cities; putting integrated management of urban systems on a sounder footing; correcting deficiencies in the urban and productive infrastructure of cities; and using policies relating to housing, services and access to public infrastructure to foster the formation of human capital.
- **improving the urban environment** by engaging development organizations in the effort to achieve environmental sustainability; modernizing the legal and regulatory framework governing the ownership and trading of land; tackling road congestion and transport and the lack of sanitation, among other actions;
- **improving governability and participation** by establishing coordination between sectoral agencies and local governments; furthering the decentralization of the State; and strengthening the administrative, technical and financial capabilities of local governments.
- **achieving policy and management efficiency**, by administering the system of territorial management, urban development and housing in an integrated fashion; establishing a regulatory framework for the contribution made by the private sector to the production and operation of urban services and housing; and fostering the usage of reliable and comparable statistics, including censuses.

**Source:** United Nations, Economic Commission for Latin America and the Caribbean: *Latin American and Caribbean Regional Plan of Action on Human Settlements*, Santiago, Chile, 1996.

## I. URBAN OVERVIEW

### A. THE GROWTH OF URBAN POPULATION

In Latin America and the Caribbean the concentration of population in urban areas has intensified in recent decades. In 1995, 73% of the population, that is, approximately 350 million people, live in urban areas. This degree of urbanization puts Latin America and the Caribbean on a par with Europe (74%) and not far behind the United States (76%) and Japan (78%). However, it should be noted that this tendency had slowed down due to the decrease in the average annual growth rate of urban population in the region from 3.7% to 2.3% during 1970 to 1995.

The highest percentage of urban population is observed in South America (83%), followed by Central America (62%) and the Caribbean (56%) in 1995 (see table A-1 in the Appendix). In South America, all countries have more than 50% of population in urban areas. In Central America and the Caribbean, although the simple average of urban population is more than 50%, the percentage of urban population is variable depending on countries. Nevertheless, it should be noted that, except for some Caribbean countries, all countries in the region shared the tendency of increased weight of the urban population. From these facts, it is possible to assume that although the speed of urbanization is declining in the region, the increase in urban population is continuing.

### B. THE GROWTH OF BIG CITIES

By the middle of the decade, some 30% of the total population and more than 40% of the urban population of the region was concentrated in cities of a million or more inhabitants. Approximately half of these inhabitants live in cities of 5 million or more.

Table 1

LATIN AMERICA: POPULATION IN LARGE CITIES

Year	Number of cities	Population (thousands)	% of total population	% of urban population
<b>In cities of one million inhabitants or more</b>				
1950	7	16 833	10.6	25.4
1960	12	32 894	15.7	31.7
1970	18	56 504	20.6	35.8
1980	24	85 241	24.4	37.4
1995	42	141 261	30.2	41.0
<b>In cities of 5 million inhabitants or more</b>				
1950	1	5 042	3.2	7.6
1960	2	12 199	5.8	11.7
1970	4	32 588	11.9	20.6
1980	4	45 046	12.9	19.8
1995	6	67 824	14.5	19.7

**Source:** Calculations based on *UN World Urbanization Prospects: The 1996 Revision* (Preliminary Version 1997), and CELADE, 1996.

The region has six major metropolises of 5 million inhabitants or more: Mexico City, São Paulo, Buenos Aires, Rio de Janeiro, Lima and Santafé de Bogotá. In 1995, the four first named were among the 15 most populous cities in the world, occupying second, third, ninth and fourteenth places respectively.

Concentration of both population and socioeconomic and administrative functions in a few large cities has been a characteristic of the region in the latter half of this century. The above table, however, shows that the relative importance of the big cities of the region has lessened: whereas in the 1970s, of the total number of people living in cities of more than a million inhabitants those living in cities of more than 5 million inhabitants accounted for 58% of the total, they now account for only 48%. This is due to the fact that the major urban centres have grown at a slower rate than the medium-sized and smaller centres of the countries' urban systems.<sup>3</sup> The main metropolitan areas in particular (Mexico City, São Paulo, Buenos Aires, Rio de Janeiro, Santiago, Caracas) have declined in relative importance in the urban context of the countries to which they respectively belong, a development that is certainly not what was anticipated by the urban forecasts of the 1970s.

The urban primacy index also illustrates the slowdown in the growth of cities. The urban primacy index is calculated as the ratio between the largest city in a country and the three next largest. Table 2 shows the decline of this index in 11 countries out of 15 countries with comparable data.

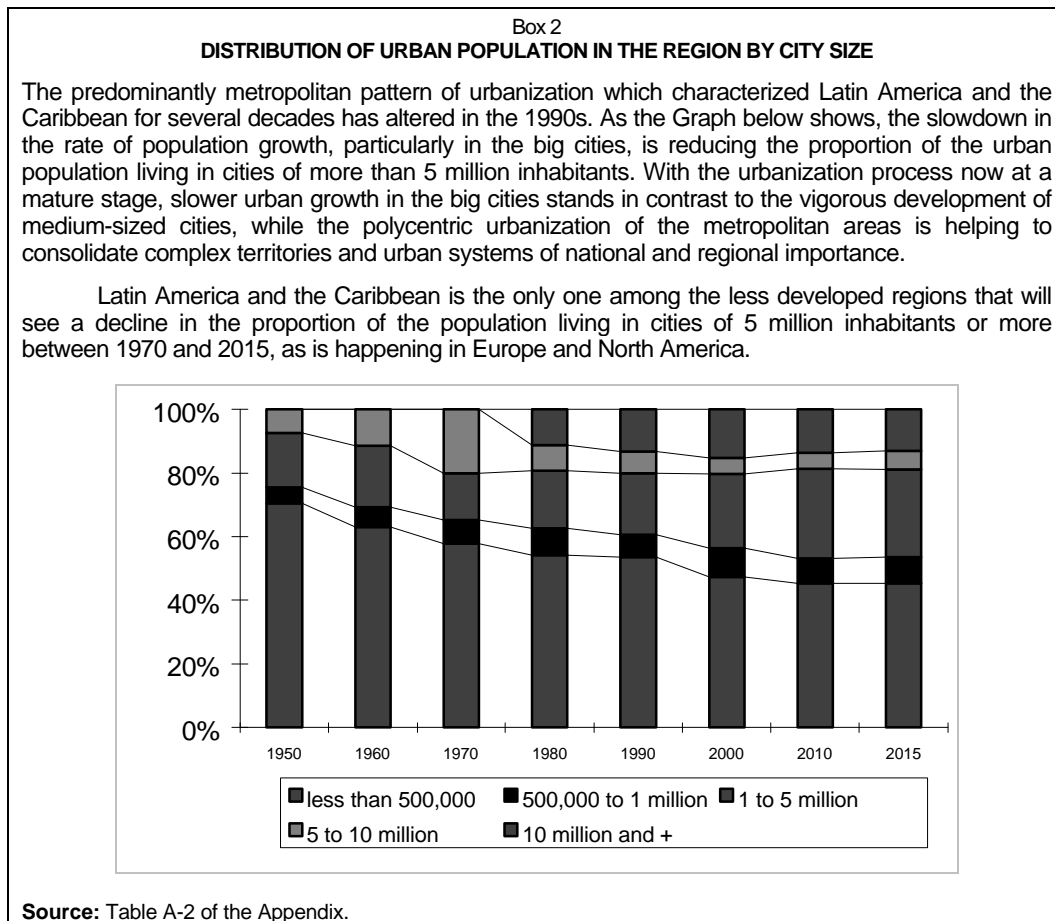
Table 2  
CHANGES IN URBAN POPULATION AND URBAN PRIMACY OF CITIES IN  
LATIN AMERICA AND THE CARIBBEAN (1970-1995)

Country	City	Urban primacy		% of urban population	
		around 1970	around 1995	1970	1995
Argentina	Buenos Aires	4	3,5	78	88
Bolivia	La Paz	1,4	0,9	41	61
Brazil	São Paulo	0,8	0,9	56	79
Colombia	Santafé de Bogotá	0,9	1	57	73
Chile	Santiago	2,8	3	75	84
Ecuador	Guayaquil	1,2	1,1	40	59
Paraguay	Asunción	6	5	37	53
Peru	Lima	4,5	4,1	57	71
Uruguay	Montevideo	4,7	7,9	82	91
Venezuela	Caracas	1,5	0,9	72	86
Costa Rica	San José	5,4	4,7	40	50
Guatemala	Guatemala City		9,6	36	39
Honduras	Tegucigalpa	1,8	1,6	29	44
Mexico	Mexico D.F.	2,7	2	59	73
Nicaragua	Managua		2,8	47	63
Panama	Panama City		3,9	50	56
Cuba	Havana	2,5	2,4	60	76
Jamaica	Kingston	4,4	2,3	42	54
Haiti	Port-au-Prince	4,7	5,4	20	32
Dominican Republic	Sto. Domingo		2,5	40	63
Trinidad and Tobago	Port of Spain		3,4	63	72

Source: United Nations *World Urbanization Prospects: The 1996 Revision* (preliminary version 1997) and CELADE 1996.

<sup>3</sup> In the 1970s, the 40 cities which were to pass the million mark by 1995 grew on average at a rate of 3.2% a year, whereas between 1980 and 1995 they grew at 2.3% a year, slower than the total urban population (which increased at a rate of 2.8% a year in the same period).

This downward trend of the primacy index appeared in countries with different levels of urbanization and at different stages in the demographic transition process, which confirms the perception that the change is a general one. Although the percentage of urban population is increasing in all countries, the weight of the biggest cities in relation to the secondary ones is decreasing. However, primacy level of cities in the region are still high in comparison to the primacy index (1995) of other major metropolitan areas, such as Tokyo (Japan) 1.6, Paris (France) 2.7, and United States (USA) 0.7.



Another indication that a more balanced urban scene is taking shape in Latin America and the Caribbean is the appearance of incipient systems of polycentric urbanization in metropolitan areas, resulting from the tendency for housing to be sited in suburban areas and for industry to move away to locations close to the large urban agglomerations. The cases of Buenos Aires, Mexico City and São Paulo are illustrative of this trend. As the major urban centres thus develop greater structural complexity, the traditional institutional arrangements of local government are being revised in the countries with the aim of achieving the kind of coherent territorial and urban management that is required for competitiveness and sustainability. As a result, the subject of metropolitan governments is being actively debated in the urban and political forums of the Region.

In the cities of the region, the pattern of development has become increasingly unequal. Whereas in the central areas the population has been declining and aging, some outer areas of cities are growing rapidly, which has meant that age structures have become younger, leading to explosive demand for land and urban services in the suburbs. This process, heightened by land speculation, has led to a great degree of residential mobility and to severe pressures on public funds for housing, infrastructure and urban services. At the same time, it has had significant environmental repercussions, as peripheral land forming the natural base of cities has steadily come to be occupied.

### **C. THE IMPORTANCE OF MEDIUM-SIZED CITIES**

Medium-sized cities are becoming increasingly important in the system of human settlements due to the rapid growth they are experiencing, which is related to the demographic and urban tendencies referred to above. Likewise, the dynamism of these centres is connected with changes in the strategies used to locate economic activities in the new framework of openness and competitiveness. What is happening is that, although the advantages that large urban markets offer in terms of economies of scale and concentration make location in a large city an attractive option, as does the proximity of labour, capital and technology, the new situation of economic openness means that other locations are also advantageous insofar as the availability of new technologies enables productive processes to be segmented and decentralized and cities to specialize economically. Furthermore, the importance of the market as a factor in determining the allocation of economic resources has diminished relatively speaking in many countries, with the proximity of political decision-making centres increasingly being taken into account when locations come to be chosen for productive activities. Medium-sized cities, therefore, can sometimes be more advantageous locations for siting businesses than national capitals, due to their proximity to sources of raw materials or basic products, supranational bioceanic corridors, ports, etc.

In contrast to their vigorous growth, some medium-sized cities suffer from severe deficiencies in terms of urban management, provision of infrastructure and housing, which means that their levels of productivity, equity and environmental sustainability tend to be even more unfavourable than they generally are in large cities. In view of this, a number of initiatives have been developed in this decade to foster sustainable development in medium-sized urban centres, as is illustrated in box 3.

Box 3

**SUPPORTING URBAN MANAGEMENT IN SELECTED MEDIUM-SIZED CITIES IN THE REGION**

In view of the importance that medium-sized cities have taken on in the 1990s as regards adequate management of the systems of human settlements in Latin America and the Caribbean, ECLAC, with the support of the Government of Italy, is implementing a project to plan out and promote urban management processes that increase urban efficiency and productivity, facilitate economic and social development and ensure sustainable and equitable development in medium-sized cities in the region.

The objective of the project's planning component is to modernize the conceptual and operational framework for urban administration in the region. The technical assistance component, meanwhile, includes implementation of activities aimed at providing support and advice to the local governments of six medium-sized cities in the region: Córdoba (Argentina), Cuzco (Peru), Ouro Preto (Brazil), Manizales (Colombia), Port of Spain (Trinidad and Tobago) and Valdivia (Chile). In the first phase, diagnostic studies were carried out for each city to provide a basis for discussing and deciding on management strategies, in forums that invited broad local participation. In the second phase, instruments and procedures were devised with a view to improving urban management, and technical assistance activities and work were also carried out. By comparing and discussing the different cases, and by publicizing experiences in the cities selected, the Project hopes to lay down guidelines for the development of similar strategies by the other medium-sized cities of Latin America and the Caribbean.

**Source:** ECLAC, Environment and Development Division, Project on "Urban Management in Selected Medium-Sized Cities of Latin America and the Caribbean" (ITA/95/S71).

## II. URBAN MANAGEMENT AND EQUITY

The Latin American and Caribbean Regional Plan of Action on Human Settlements identifies social inequality, manifesting itself in urban segregation and the coexistence of markedly different qualities of life within cities, as being a distinctive quality of settlements. In view of this, it subscribes to the regional objective of "developing human settlements where poverty and shortages have been overcome"<sup>4</sup> by implementing measures and initiatives covering basic infrastructure, housing, education, health, social participation, etc., that can help to remove structural factors that perpetuate poverty.

### A. THE SCALE OF URBAN POVERTY

The situation of urban poverty is said to be improved during the 1990s. Measurements carried out by the different countries indicate that the percentage of households living under poverty fell from 41% in 1990 to 39% in 1994, despite the differences depending upon countries (table 3). Whereas poverty has fallen in the last two years in Brazil, Chile and Peru, it has worsened in Argentina and Venezuela, remaining unchanged in the other countries.

Table 3  
LATIN AMERICA: PERCENTAGE OF POOR HOUSEHOLDS BY AREA OF RESIDENCE,  
(AROUND 1994)

Country	% of households below the poverty line <sup>a</sup>					% of households below the indigence line				
	Total	Urban			Rural	Total	Urban			Rural
		Urban total	Metrop. area	Other urban			Urban total	Metrop. area	Other urban	
Argentina	-	12	10	16	-	-	2	2	3	-
Bolivia	-	41	-	-	-	-	14	-	-	-
Brazil	41	39	31	41	51	-	22	-	-	-
Chile	24	2	17	27	26	7	6	4	7	8
Colombia	47	41	35	43	57	25	16	12	18	38
Costa Rica	21	18	16	21	23	8	6	4	7	10
Guatemala	-	-	-	-	72	-	-	-	-	45
Honduras	73	70	-	-	76	49	41	-	-	55
Mexico	36	29	-	-	47	12	6	-	-	20
Panama	30	25	23	35	41	12	9	8	13	20
Paraguay	-	-	36	-	-	-	-	13	-	-
Uruguay	-	6	4	7	-	-	1	1	1	-
Venezuela	42.1	41	21	46.2	47.7	15	14	4	16	23
Latin America	39	34	-	-	55	17	12	-	-	33

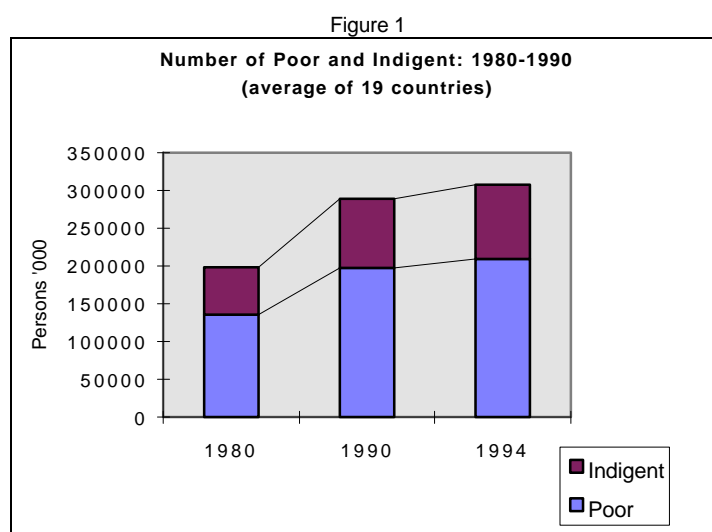
Source: ECLAC, *Social Panorama of Latin America, 1996 edition* (LC/G.1844), Santiago, Chile.

<sup>a</sup> Includes households below the level of indigence or extreme poverty.

<sup>4</sup> Preamble to the Regional Plan of Action.

The picture is different in the Caribbean. In this region, poverty has been on the rise over the past two decades, despite the considerable economic growth experienced throughout the region in 1980s, except for Guyana and Trinidad and Tobago. Although the percentage of population under the poverty line varies from country to country between 12% and 42% on the whole, 38% of the population is under poverty.<sup>5</sup>

Although the percentage of poor households in the region as a whole has a tendency to decrease, 210 million Latin Americans are still poor, and more than 98 million lack even the resources necessary to feed themselves properly.<sup>6</sup> In fact, the number of poor and indigent increased in 1994 in comparison to 1980 (fig.1).



Source: ECLAC, *The Equity Gap* (LC/G.1954), Santiago, Chile, March 1997.

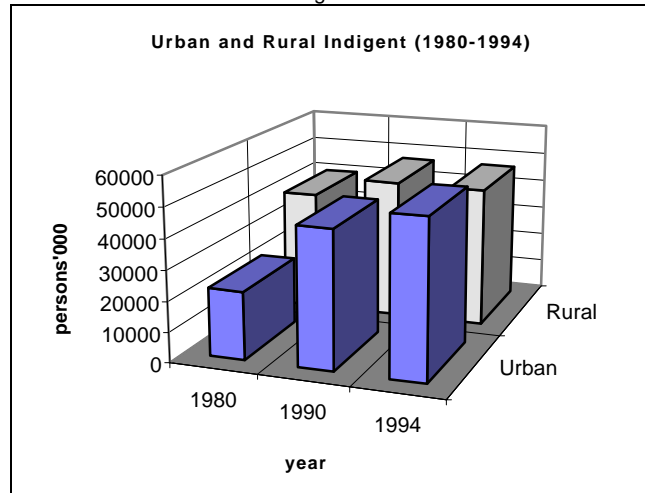
Figures in table 3 illustrate that some 34% of urban households live under the poverty line and some 13% are indigent. It shows also that the percentages of poor and indigent are higher in rural areas than urban areas. Nevertheless, when the absolute population of poor and indigent is considered, the picture is reversed: there are more poor in urban areas than in rural areas (figs. 2 and 3). While in 1990 the number of indigent was similar in the rural and urban areas, in 1994 clearly urban indigent became more numerous than rural ones. Regarding poor people, already in 1990 their numbers were much higher in urban than in rural areas. The differential increased in 1994. Although rural poverty should not be overlooked, as most of the poor are now urban, alleviating poverty has become a central objective in the management of cities.

<sup>5</sup> ECLAC, *The Equity Gap* (LC/G.1954), Santiago, Chile, March 1997.

<sup>6</sup> For a more thorough analysis of this subject, see ECLAC, *Social Panorama of Latin America and the Caribbean, 1996* (LC/G/1946-P), Santiago, Chile, February 1997.



Figure 2



Source: ECLAC, *The Equity Gap* (LC/G1954), Santiago, Chile, March 1997.

Figure 3

Number of Poor and Indigent (Estimates of 1994)			
	Poor		
	Total	Urban	Rural
1980	135900	62900	73000
1990	197200	120800	76400
1994	209300	135400	73900
		Urban	Rural
	1980	62900	73000
	1990	120800	76400

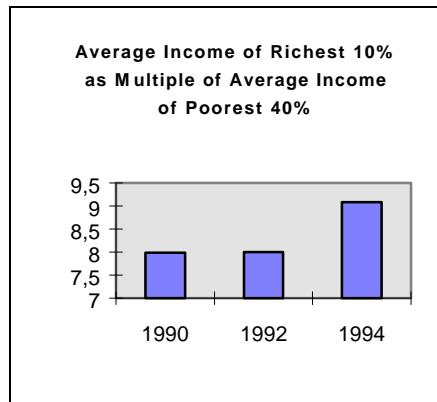
Source: ECLAC, *The Equity Gap* (LC/G1954), Santiago, Chile, March 1997.

## B. URBAN INEQUALITY

One of the major issues in Latin America and the Caribbean is the high levels of income inequality. Despite improved economic growth in the 1990s, income distribution in the region grew worse. In 13 Latin American countries, the income of the richest 10% exceeded that of the poorest 40% by a factor of 5 to 15 in urban areas and 5 to 10 in rural areas.<sup>7</sup> Figure 4 illustrates changes in income inequality by comparing the multiple of average income of the richest 10% with the average income of the poorest 40% for 13 Latin American countries. In 1990, the richest 10% had an average income 8 times higher than the average income of the poorest 40%. In 1994, the ratio increased to 9 times.

Figure 4

<sup>7</sup> ECLAC, *The Equity Gap*, op.cit.



Source: ECLAC, *The Equity Gap*, op. cit.

### C. HOW POVERTY MANIFESTS ITSELF IN CITIES

Today's urban poverty manifests itself in different ways from the poverty of the 1970s. At that time, it was mainly concentrated in the periphery of the big cities, in the form of squatter settlements lacking in any kind of access to urban services and goods. Aided by a slowing of their rate of growth, the metropolises of Latin America are now providing a certain level of urban services to the inhabitants of these marginal settlements, as they have become fully fledged urban districts. Poverty, manifesting itself in inadequate incomes, child malnutrition, poor school performance, early school-leave, untreated illnesses and child labour, now coexists in closer proximity to the ever more unattainable wealth displayed by sectors with high levels of income and consumption. The consequent fragmentation of the urban space explains a great many of the manifestations of violence and social disintegration now seen in cities, as well as the diminishing value attached to public spaces as an expression of the communal life of citizens.

### D. FORMAL AND INFORMAL EMPLOYMENT

The cities of Latin America still display serious limitations in terms of providing their inhabitants with better prospects of employment and progress. Although the per capita income figures show that considerable progress is being made, the efforts being made in most of them to increase urban employment are still not sufficient to match historic levels. According to the figures, out of 14 countries, only 4 reduced urban unemployment between 1994 and 1995, while nine countries saw an increase (table A-3 of the Appendix).

At the beginning of the 1990s, economic growth and rising employment followed a parallel path in most of the countries; since the middle of the decade, however, different trends have begun to be seen in the two indicators. In this latter half of the decade, growth in the economy is no longer accompanied by greater availability of employment for the population. This is due to a number of factors, among which the most salient are of a demographic and economic nature. The demographic factors are the increase in the economically active population and the persistence of migratory flows from rural areas into many centres of population. A rising rate of labour force participation, due above all to increasing participation by women and young people in the labour market, has also increased the need for new jobs. Although the rapidity of population increase has fallen in

the 1990s (due to the demographic transition being experienced by the countries), the effects of this trend have not yet fed through to the population of working age, so that the demand for jobs is still increasing at a rapid rate. This increased demand is now concentrated more in urban areas (80%) than it was in the 1980s (70%).

The economic factors are related to the reforms that have been carried out in many countries in the Region. Prominent among them is the reduction of employment in the public sector, from 15.3% of total employment in 1990 to 13% in 1995. Again, restructuring of production processes in the private sector has meant an increase in capital-intensive activities, which in many cases have replaced labour-intensive ones.

Employment in the informal sector expanded in the region in recent years as it absorbed unemployed of the formal sector. During the period 1990-1995, the greatest number of jobs was created in the informal sector. ECLAC has calculated that of every 100 new jobs created during the period, 84 were of an informal kind.<sup>8</sup> Considering that earnings in the informal sector are generally lower than those in the formal sector, this suggests a widening of the earnings gap, particularly in cities, where the economically active population is concentrated. In fact, the relatively low unemployment figures, averaging around 8%, do not imply that many city dwellers who have access to work will thereby succeed in remaining outside poverty.

The facts cited above have made it essential for particular priority to be given to creating more productive employment in the cities of the Region. The challenge is not only to increase the quantity of work on offer, but to improve its quality so that it can provide earnings which are sufficient at least to ensure that households can survive. Given the greater relative weight of informal employment in medium-sized and smaller cities, it is in these that preferential consideration needs to be given to measures to increase productive employment and thus bring down the high rates of poverty that prevail there.

The implications of this challenge for the urban development of the region's cities have been various. On the one hand, there is undoubtedly a greater commitment to managing cities in a way that safeguards and increases their productive potential, by providing them with adequate infrastructure and accessibility. However, housing programmes too are paying greater attention to the question of location, to ensure that this takes account of the employment opportunities available, and thus facilitates access to these by the population. Another interesting example is the effort that has been made in a number of countries to support the development of productive activities at the local level by means of microbusinesses and non-traditional arrangements, as illustrated by various successful practices implemented in the region.

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<sup>8</sup> ECLAC, *The Equity Gap*, op. cit.

### **III. MANAGING URBAN LAND**

#### **A. THE DEMAND FOR URBAN LAND**

In the region, there is still a strong demand for urban land to cope with the growth of population in the cities and, in many cases, to accommodate migrants. Increasing incomes among large sectors of the urban population have, on the other hand, created patterns of housing and social infrastructure that consume large tracts of suburban land in expensive blocks of flats, green spaces, shopping centres and roads. Again, the production and service activities associated with the new scenario of economic globalization are also putting pressure on the market for land.

ECLAC has calculated that, if the low densities that characterize the growth of Latin American settlements remain unchanged, it will be necessary to incorporate an average of around 160,000 hectares a year into existing cities simply in order to house the new city dwellers that the region will have in the next five years.<sup>9</sup> Housing policies themselves still encourage urban expansion and land speculation in many cases, by building social housing in the outskirts of cities, where land prices are lower, employing low-density design patterns.

#### **B. ACCESS TO URBAN LAND**

Since the public sector has only a very limited ability to regulate the land market, its operations are largely determined by speculative practices. Nonetheless, in recent years there has been a growing awareness of the need to take a more careful approach to managing urban expansion, and to amend the obsolete regulatory and legal frameworks that govern the ownership and trading of urban land in most of the countries.

A considerable proportion of the land used for spontaneous settlements is still provided by means of commercial transactions that are irregular from both the legal and urban planning points of view, such as irregular "pirate" development. Although developments in the 1990s, including more formal tenure and increases in the price of land adjoining cities due to speculation, have made it more difficult for access to be gained to land by means of massive or gradual occupation of sites on the margins of legality or unconventional ways of splitting plots, this is still an option for families that are shut out from the formal market for land. Land that is occupied on the outskirts of cities ends up by being incorporated into the urban ambit when the situation comes to be regularized by governments, municipalities or the families themselves.

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<sup>9</sup> ECLAC, *Human Settlements: The Shelter of Development* LC/L.906 (CONF.85/3)/Rev.1, 1995.

**PROBLEMS ASSOCIATED WITH INADEQUATE MANAGEMENT OF URBAN LAND**

The relative lack of success of urban policies in Latin America and the Caribbean in controlling and managing urban land has led to problems such as:

- Ever-rising prices for urban land, which in turn limit the scope of social housing policies and encourage segregation and the outward growth of cities, with consequences for equity and productivity in cities;
- Increasing illegal urbanization on the margin of any urban regulation, sometimes with little or no prospect of sewerage being installed subsequently, and with serious environmental implications;
- Polarization between sectors where poverty is concentrated in areas with lower land prices, whether this results from social housing policies or from commercial or non-commercial transactions, and other sectors where wealth is concentrated in affluent districts, with housing of a high standard in extensive grounds, social infrastructure, wide avenues, parks, etc.

**Source:** ECLAC (1991), *Notes on housing and land in large cities of Latin America* (LC/R.1085).

**C. SOME FORMS OF INTERVENTION**

The forms of intervention devised to manage urban land on a sustainable basis have had limited effects. Examples of regulation of and direct intervention in the land market by means of measures such as land purchasing, the creation of land banks or regulation and control of speculation by public bodies have been very few and far between and limited in scope, due to the existence of strong vested interests in the real-estate market, the limited management capabilities of governments, the scarcity of public funds and the lack of political will to carry out or authorize such action. In cases where mechanisms have been established to facilitate state action and/or joint management with the private sector, they have been limited in their application and effects. The schemes implemented by local governments in this area appear to have been more effective, an example being the municipality of Curitiba in Brazil, among others.

Urban planning regulations relating to land use in and around cities are another instrument that has been employed in the region to guide the land market. At best, however, these have only enabled a degree of control to be exercised over the speed at which cities have expanded. Focusing hitherto mainly on physical and spatial aspects of urban development, traditional urban planning instruments have proved ineffective in dealing with the land market pressures created by the dynamic social and economic processes now unfolding in the cities of the region.

Another approach has been to reform real-estate and land taxation systems with a view to encouraging efficient use of urban land, capturing the added value generated in the land market and transferring the costs of urban expansion and land preparation to the real-estate agents that create them. The few attempts made at tax reform have been unambitious due to a lack of political receptiveness and to the institutional and technical difficulties that public bodies have had, for example, in carrying out registration of urban properties and in updating the tax base.

Finally, mention must be made of the way certain countries are revising their social housing strategies in order to deal with a growing shortage of land suitable for urban use. Measures such as raising the density of housing in cities, rehabilitating run-down sectors and giving priority to smaller housing units on spare inner-city land are beginning to replace the big new low-density housing projects that, especially in past decades, have contributed to urban sprawl and growing demand for new land.

## IV. HOUSING OVERVIEW

### A. CURRENT SHORTFALLS

The censuses of 19 countries show that, at the beginning of the 1990s, the region had 93 million private housing. Two thirds of these can be regarded as acceptable; the rest require improvement or replacement (table A-4 of the Appendix). Existing shortfalls and scarcities are set out in the table that follows.

Table 4  
LATIN AMERICA AND THE CARIBBEAN (19 COUNTRIES) - HOUSING SITUATION IN THE 1990s<sup>a</sup>

Country	Year	Unaffected households	% of all hhs.	Quantitative deficit <sup>b</sup>	% of total deficit	Qualitative deficit <sup>c</sup>	% of total deficit	Total deficit <sup>d</sup>
Argentina	1991	6 434 209	68.6	1 449 783	49.2	1 496 212	50.8	2 945 995
Bolivia	1992	880 172	54.5	406 979	55.4	327 844	44.6	734 823
Brazil	1991	19 490 609	54.9	5 881 221	36.7	10 145 712	63.3	16 026 933
Chile	1992	2 394 995	71.2	609 255	62.8	361 212	37.2	970 467
Colombia	1985	3 303 051	56.7	1 098 711	43.6	1 423 095	56.4	2 521 806
Costa Rica	1984	339 840	64.4	71 073	37.9	116 386	62.1	187 459
Cuba	1981	1 698 649	72.3	395 472	60.7	256 100	39.3	651 572
Ecuador	1990	1 375 212	64.4	424 833	55.8	336 834	44.2	761 667
El Salvador	1992	508 858	46.6	402 410	69.0	180 461	31.0	582 871
Guatemala	1994	552 934	34.7	328 978	31.7	709 911	68.3	1 038 889
Honduras	1988	481 658	59.6	137 026	41.9	189 767	58.1	326 793
Mexico	1990	11 382 906	65.4	3 323 847	55.3	2 687 615	44.7	6 011 462
Nicaragua	1991	128 545	...	289 994	56.8	220 992	43.2	510 986
Panama	1990	365 650	67.5	103 688	58.9	72 366	41.1	176 054
Paraguay	1992	517 578	59.2	161 227	45.3	194 889	54.7	356 116
Peru	1993	2 231 469	46.9	1 207 483	47.7	1 323 828	52.3	2 531 311
Dominican Rep.	1993	326 991	61.1	8 570	4.1	199 266	95.9	207 836
Uruguay	1985	685 934	76.0	120 045	53.4	104 553	46.6	224 598
Venezuela	1990	2 672 168	71.2	763 413	70.8	315 359	29.2	1 078 772
L A and C		55 771 428	60.0	16 544 477	44.5	20 662 402	55.5	37 206 879

**Source:** Table A-4 of the Appendix.

**Note:** Percentage of the 1990 population of Latin America and the Caribbean covered: 96.15%.

<sup>a</sup> ECLAC, Human Settlements: The Shelter of Development, op. cit.; <sup>b</sup> Quantitative deficit: Number of households - number of adequate and repairable dwellings; <sup>c</sup> Qualitative deficit: Number of repairable dwellings;

<sup>d</sup> Total deficit: quantitative + qualitative deficit.

The table, which covers 96% of the region's population, shows the severity of the regional deficit, which amounts to some 38 million units. Of this total, 17 million (or 18%) constitute the quantitative deficit, and 21 million (or 22%) are the qualitative deficit (box 5). According to other sources, the aggregate quantitative and qualitative deficit is even higher and could reach 50 million units.<sup>10</sup>

<sup>10</sup> ECLAC, *La producción de vivienda en América Latina y el Caribe*, Santiago, Chile, 1996.

Box 5

#### **THE HOUSING SITUATION IN LATIN AMERICA AND THE CARIBBEAN**

The countries of the Region suffer from significant housing shortfalls. Only 60 out of every 100 households have adequate housing, whilst 22 require improvements and 18 need a new home or to rebuild the one they are now occupying (see table A-4 in the Appendix). Taking both qualitative and quantitative aspects into account, the current deficit is at least 38 million units. This figure is increasing by more than two million homes a year as new households come into being. The rate of construction required given the accumulated deficit is not to increase is considerably higher than what has so far been achieved by the region's housing policies. The great majority of the countries are not even managing to construct enough housing for the new households that come into being each year, so their shortfalls are increasing from year to year. Again, the rate at which the housing stock is growing obsolete is still high, due to a lack of housing maintenance and repair programmes; this in turn is contributing to a worsening of the deficit, as it means that high rates of replacement need to be taken into consideration.

**Source:** ECLAC, *Human Settlements: The Shelter of Development*, op. cit.

### **B. GROWTH IN HOUSING NEEDS**

Urbanization and the demographic transition have accelerated the demand for new housing in Latin America and the Caribbean. Although the rate of population growth has slowed, new households are being formed at a rate of around 3% a year. This is due to a steady reduction in the size of households in the different countries. Again, greater diversification can be seen in the demand for housing. In Argentina, Chile and Uruguay, for example, the relative aging that is resulting from falling birth rates and increased life expectancy means that the number of households made up of just one or two adults is rising. In those countries where the urbanization process is still proceeding apace, young people entering adulthood are a dynamic component in the demand for housing. Meanwhile, other countries where the transition is just beginning and is not yet very marked continue to have a great many large families with complex structures. Households headed by women are to be found in the region in large numbers, and these groups are of particular importance for housing policy as they tend to have higher rates of poverty and special housing needs.

### **C. THE HOUSING TENURE**

Latin America and the Caribbean constitute a region of homeowners: two out of every three dwellings are owner-occupied, a high figure in comparison with other regions. Census information from the 1990s confirms that this phenomenon is not restricted to the more urbanized or developed countries in the region; countries as diverse in their housing and social situation as Barbados, Panama, Peru, and Venezuela all have percentages of owner-occupied dwellings higher than 70% (table 5).

Table 5  
HOUSING TENURE: % OF OWNERSHIP (1990s)

	Country	%
<b>Caribbean sub-region</b>	Antigua Barbuda	65.0
	Barbados	76.1
	Belize	65.8
	British Virgin Is.	40.2
	Dominica	72.0
	Grenada	78.8
	Guyana	63.2
	Jamaica	52.5
	Montserrat	72.0
	Nevies	78.9
	St Lucia	72.3
Turks & Caicos	65.7	
<b>Central America sub-region</b>	El Salvador	69.6
	Panama	76.0
	Nicaragua	84.1
<b>South America sub-region</b>	Argentina	68.0
	Bolivia	66.0
	Chile	68.0
	Ecuador	68.0
	Peru	71.9
	Venezuela	76.0

**Source:** ECLAC, *Anuario Estadístico de América Latina y el Caribe*, Santiago, Chile; national housing censuses (various years); and UNCHS national-level indicators.

The proportion of owner-occupied dwellings was already high in the 1970s<sup>11</sup> and it is improving in recent decades. The reason for high ownership is social and commercial incentives given to encourage the purchase of housing. This high dwelling ownership is a positive socio-economic factor. Studies done in Jamaica illustrate that the owner occupied dwellings are much better equipped in sanitation and water facilities than rented dwellings.<sup>12</sup>

#### D. THE HOUSING FACILITIES

Despite considerable progress in improving or extending housing facilities, 30% of the housing still has no access to safe drinking water, 56% have no sewage and 25% no electricity. Of 22 countries in the region, those most deficient in these aspects are Belize, Bolivia, Dominican Republic, Paraguay and Peru. High coverage achievement are observed in Barbados, Chile, Costa Rica, Colombia and Venezuela (tables 6 and 7).

Major differences between urban and rural dwellings: some 53% of rural households in Latin America are poor, and of these, some 30% are indigent—in contrast to figures of 34% and 13%, respectively, in the urban sector (see table 3)—. Despite the efforts that have been made, particularly as regards rural sanitation, the housing conditions of the rural population are still poor (table A-6 of the Appendix). By contrast to urban areas, where some 87% of households have piped water, inside or outside the dwelling, only

<sup>11</sup> ECLAC, *Human Settlements: The Shelter of Development*, op. cit.

<sup>12</sup> Bailey, Wilma and others, *The Contribution of Housing to Economic and Social Development in Jamaica*, April 1992.



25% or so of rural households have this service. One in ten rural dwellings is connected to a sewer or septic tank, while the figure for the cities is two in every three dwellings.

Table 6  
SANITARY SITUATION IN SOME LATIN AMERICAN AND CARIBBEAN COUNTRIES

Country	year	Number of dwellings	With piped water		With sewers		With electricity	
			N°	%	N°	%	N°	%
Barbados	90	75.211	70.693	94,0	49.833	66,3	69.630	92,6
Belize	91	37.658	18.542	49,2	13.094	34,8	25.289	67,2
Cuba	81	2.290.176	1.697.904	74,1	1.113.026	48,6	1.897.867	82,9
Dominican Rep,	81	1.140.798	631.907	55,4	292.766	25,7		
Trinidad & Tobago	88 <sup>a</sup>	231.436	164.782	71,2	127.521	55,1	211.764	91,5
Costa Rica	84	500.030	434.345	86,9	327.748	65,5	415.463	83,1
El Salvador	92	1.049.191	581.567	55,4	334.797	31,9	757.201	72,2
Guatemala	94	1.553.708	1.055.960	68,0	491.129	31,6	864.211	55,6
Honduras	88	762.117	480.576	63,1	155.841	20,4	301.827	39,6
Mexico	90	16.035.233	12.729.987	79,4	8.362.838	52,2	14.033.451	87,5
Panama	90	524.284	423.168	80,7	153.581	29,3	381.676	72,8
Argentina	91	8.515.441	7.873.880	92,5	3.287.078	38,6	7.957.986	93,5
Bolivia	92	1.614.995	831.113	51,5	298.301	18,5	801.629	49,6
Brazil	91	34.734.715	24.562.013	70,7	12.256.963	35,3		
Chile	92	3.101.356	2.734.645	88,2	2.169.264	69,9	2.733.786	88,1
Colombia	93	6.205.555	4.945.893	79,7	3.910.521	63,0	5.323.656	85,8
Ecuador	90	2.008.665	1.259.638	62,7	793.178	39,5	1.559.786	77,7
Paraguay	92	855.547	269.443	31,5	65.817	7,7	493.898	57,7
Peru	93	4.427.517	2.167.935	49,0	1.769.635	40,0	243.666	5,5
Uruguay	85	823.253	660.847	80,3	381.581	46,4	702.912	85,4
Venezuela	90	3.517.229	2.863.702	81,4	2.220.945	63,1	3.274.236	93,1
Region		81.488.674	58.584.660	71,9	35.288.379	43,3	34.091.948	74,7

Source: ECLAC, *Human Settlements: The Shelter of Development*, op. cit. and national censuses.

<sup>a</sup> Number of housing for Trinidad and Tobago is of 1990.

Table 7  
SANITARY SITUATION IN SOME CARIBBEAN COUNTRIES

Country	Year	Total N° of households	%	Number of households	%	Number of households	%	Number of households
Antigua Barbuda	91	18.476	61,7	11.400	52,8	9.755	82,0	15.150
British Virgin Is.	91	5.332	77,2	4.116	89,7	4.783	98,0	5.225
Grenada	91	24.271	63,6	15.436	36,3	8.810	69,0	16.747
Guyana	91	167.716	61,5	103.145	30,4	50.986	...	...
Montserrat	91	3.855	91,0	3.508	69,9	2.695	...	...
St. Kitts and Nevis	91	2.688	...		55,7	1.497	79,0	2.124
St. Lucia	91	33.079	...		35,7	11.809	73,0	24.148
Totals		255.417	63,0	137.606	35,0	90.335	76,0	63.394

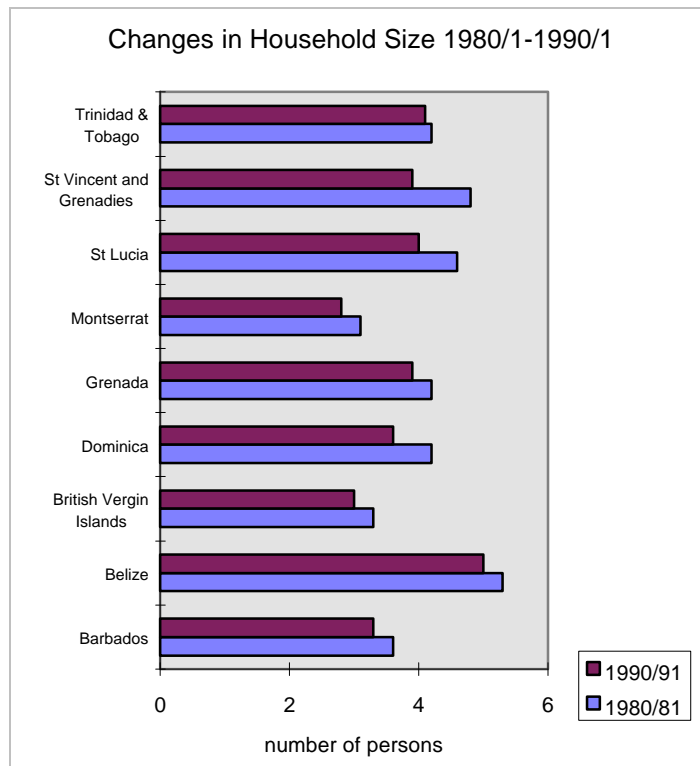
Source: ECLAC Subregional headquarters for the Caribbean, *Digest of Selected Demographic and Social Indicators 1960-1994 for CDCC Member Countries*, Port of Spain, Trinidad and Tobago, 1995.

Box 6

**HOUSING DEMAND IN THE CARIBBEAN**

Although the slowing of population growth means that with a certain time lag the annual absolute increase in the region's population will decline, it will not bring about a commensurate decline because there is an accumulated deficit. The formation of new households in the region is faster than the provision of housing. In Jamaica, for instance, during the period 1987-1993, the annual average production of housing units (formal sector registered statistics) was 4,338 units, while an average of 16,000 new households were formed every year in the same period.

The average size of households declined in the Caribbean between 1980 and 1990 (see graph below). The percentage distribution of households by size also depicts this tendency with a higher percentage of households with 1 or 2 family members. Given the reduction in population growth, it is the nuclearization of the family which becomes the main explanation of the increase in the demand for housing.



**Source:** ECLAC, *Human Settlements: The Shelter of Development*, op. cit; Habitat, *JAMAICA: Habitat II National Report 1996*, Istanbul, Turkey, June 3-14, 1996.

## V. THE PROVISION OF HOUSING

### A. NEW TENDENCIES IN HOUSING POLICY

In response to the challenges arising from their housing situations and the discussions and reviews generated around the main world forums in the 1990s, in particular the Earth Summit and Habitat II, the housing policies of the different countries are undergoing significant changes, such as those highlighted in box 7. Thus, for example, housing programme resources are no longer being channelled solely or for preference into investment; instead, a substantial portion is being used to develop housing strategies that include organisational, social and productive components, among others.

Box 7 SOME CHANGES IN THE HOUSING POLICIES OF THE COUNTRIES OF LATIN AMERICA AND THE CARIBBEAN		
	Characteristics until the 1990s	Tendencies appearing in the 1990s
<b>Relationship with urban development</b>	Separation between urban and housing activities	Greater integration of housing and urban programmes
<b>Public bodies responsible</b>	Sectoral institutions, particularly national ones (Ministries, specialist agencies)	Territorially based institutions, both subnational and local (Municipalities)
<b>Type of action</b>	"One-off", or repetition of isolated initiatives	Sustained and cumulative action that is repeatable and sustainable
<b>Use made of sectoral funds</b>	Emphasis on physical investment in residential buildings or infrastructure	Balance between investment and operation (including e.g. strengthening of institutions, training, community organisation)
<b>Source of funding for social housing</b>	Sectoral budget, almost exclusively from public funds, with very little involvement by beneficiaries	Mixed financing, with emphasis on private funding and participation by beneficiaries
<b>Parameters of effectiveness</b>	Primarily quantitative parameters (e.g. number of dwellings, m <sup>2</sup> built, drinking water coverage, etc.)	Qualitative parameters (higher quality of life, environmental sustainability, urban integration, gender awareness)
<b>Parameters of efficiency</b>	Lower unit cost for action or solution implemented	Resources activated, synergies, autonomy of groups, etc.

Generally speaking, housing initiatives in both rural and urban areas now need to be better integrated with other programmes of a social, economic or environmental nature, and this means that local authorities are well placed to play a leading role in the field of housing, which until recently was the exclusive preserve of specialized sectoral institutions.

## B. SOCIAL HOUSING AND URBAN DEVELOPMENT

The high level of urbanisation which now exists means that the urban implications of initiatives in the housing field need to be considered with greater care. Considering the size of cities and the degree of segregation that exists in them, the countries are reviewing the practice of siting low-density social housing for preference on cheaper land in the urban periphery. Experiments have also been carried out to improve recovery, maintenance and refurbishment of the housing stock as a way of providing homes without necessarily contributing to urban sprawl, and of avoiding social, functional and material obsolescence in inner city areas and consolidated quarters. Schemes of this kind are still not the norm, but they are becoming increasingly common in the region, and successful programmes have been or are being implemented in cities such as Bogotá, Buenos Aires, Cartagena de Indias, Havana, Mexico City, Ponce (Puerto Rico), Rio de Janeiro, Salvador de Bahía, San Juan (Puerto Rico), Santiago (Chile), and Santo Domingo to name just a few.

A policy of laying sewers and rehabilitating squatter and informal settlements is coming to be preferred to the massive removals practised in the 1970s and 1980s, the results of which have not been considered satisfactory from the point of view of urban and social integration. These programmes are complemented by non-traditional forms of housing assistance devised by municipalities, non-governmental organisations and communities themselves, to ensure that the effort to house homeless families is consistent with action to improve and consolidate urban centres.

### Box 8

#### BEST PRACTICE IN THE LATIN AMERICAN AND CARIBBEAN REGION

The call by the Habitat II Preparatory Committee for details of successful schemes relating to human settlements to be submitted to it met with a strong response in Latin America and the Caribbean. Of the twelve schemes finally selected from around the world as examples of "best practice" out of the hundreds of reports submitted, two came from the Region. The URBE-Don Bosco Barrio Plan, implemented in the suburbs of Benavidez, to the north of Buenos Aires in Argentina, addresses a problem that is fundamental to the provision of housing for low-income groups in most Latin American urban centres: the difficulty of obtaining access to land in built-up areas. The other choice, the Mutirao 50 Project, carried out in the Municipality of Caucaia, in the Metropolitan region of Fortaleza, Brazil, is an ambitious initiative aiming at social, housing and urban progress, being carried out by a grass-roots organization representing some 18,000 low-income families, in conjunction with their respective municipalities, and with technical advice from non-governmental and university organizations.

This latter project in particular has characteristics that well illustrate the new trends in housing action in this Region as the decade draws to an end. Its success in practice can be attributed on the one hand to an operational design that includes coordination of the interests of the community with a wide range of supporting organizations in a process of "learning by doing". On the other hand, it takes a remarkably comprehensive approach to the idea of the habitat, linking consolidation of housing and infrastructure with the issues of employment, education, training, urban services, women's development, etc., within a framework of social participation and strengthening of the institutional structures of local government.

**Source:** United Nations Centre for Human Settlements, 1996.

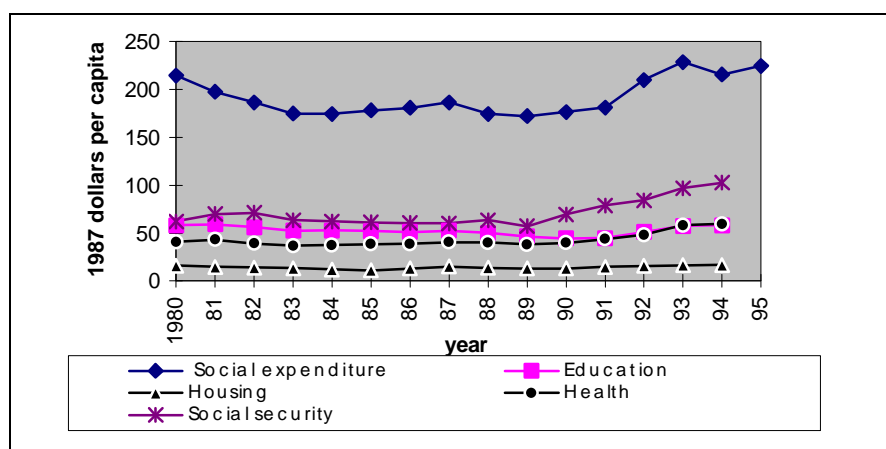
### C. DECENTRALIZATION OF HOUSING MANAGEMENT

Until a few years ago, only in a few countries did housing policies provide a space for the sub-national and local levels; the great majority operated a centralized system, which included national bodies of ministerial rank or institutions specializing in either financing or construction. Decentralization has now won a degree of acceptance, so that municipalities can take part in drawing up and managing housing programmes. Local authorities, for their part, have shown a keen interest in becoming involved in the area of housing, as is demonstrated by their participation in the process of preparation for Habitat II and in the Conference itself. The agreement adopted during the Fifth Regional Meeting of Ministers and High-level Authorities of the Housing and Urban Development Sector of Latin America and the Caribbean (Kingston, November 1996) for reactivating and maintaining a broad dialogue with local governments to discuss and implement housing programmes, reflects the interest felt in greater collaboration between ministerial and local institutions in this field.<sup>13</sup>

### D. PUBLIC SPENDING AND FOCUSING OF RESOURCES

Social expenditure on housing in the region is lower than other categories of social expenditure such as education, health and social security. During the first half of the 1990s, social expenditure as a whole increased; however, the increase of spending in housing continues to be small. According to the data of 18 Latin American countries, the housing sector had the lowest share in public social expenditure throughout the 1980s and up to the mid 1990s (fig. 5).

Figure 5  
EVOLUTION OF SOCIAL EXPENDITURE 1980-1994  
(SIMPLE AVERAGE OF 18 LATIN AMERICAN COUNTRIES)



Source: ECLAC, *Cuadernos de la CEPAL, Evolución del Gasto Público Social en América Latina: 1980-95*, N° 80 (LSG/1949P), Santiago, Chile, July 1996.

<sup>13</sup> Agreements of the Fifth Regional Meeting of Ministers and High-level Authorities of the Housing and Urban Development Sector in Latin America and the Caribbean (Kingston, Jamaica, 12-15 November 1996).

The improved economic performance in the 1990s affected positively public social spending.<sup>14</sup> Public social expenditure in the region increased during the first half of the 1990s. Data for 18 Latin American countries show that public social spending had recovered in the mid 1990s to the level of 1980. Public expenditure in housing recovered more slowly than in other social sectors such as social security and education.

As seen in Chapter IV, both qualitative and quantitative housing deficiencies exist in the region. Considering the region's growing urban population, it is urgent to find solutions for growing needs of housing. However, given the overall development policy perceptions of the 1990s, where privatization of public services has proceeded, an increase in expenditure on housing under the umbrella of social expenditure would seem difficult. Institutions in the sector now recognize that and are concentrating their efforts on attracting new resources, above all, from the private sector.

As public funds for housing have declined, so greater attention has been paid to ensuring that they are suitably focused, and that the social efficacy of public housing programmes is thereby safeguarded. To achieve this, more sophisticated and selective systems have been set up to control access for the different demand segments. In some countries such as Chile and Costa Rica, social statistics and information systems have been effective in supporting procedures for selecting beneficiaries, and have enabled resources to be better focused on lower-income families.

## **E. INNOVATIVE FINANCING FEATURES**

The efforts made since the last decade to manage monetary policy prudently and to liberalize financial flows have made it easier to channel funds from the private sector into the housing sector. In a number of countries, housing finance, which was formerly kept separate from the rest of the financial system, has moved towards open systems which are more attractive to private investors. Although in the long run this process has had a positive effect on the overall availability of funds for housing, the considerable difficulties which accompanied this switch from "specialized" housing financing in a number of countries led to more or less prolonged interruptions in the financing and production of housing.

New financial and regulatory instruments have also been developed to increase the efficiency and effectiveness of public housing programmes. The supply-oriented subsidies that were the rule until the 1980s, such as tax exemptions or preferential credits for housing production, have been replaced by direct demand subsidies, which are considered more effective in securing socially fair and objective housing provision. The experience shows that these subsidies can enable them to manage the sectoral budget better and to create a diversified supply of housing, in contrast to the rigid demarcation between "private" and "public" housing that was the norm until the 1980s. In fact, the system of direct subsidies on demand, in which the state lends money to those who want housing through other financial organizations, was introduced in the late 1980s in some Latin American countries such as Colombia, Costa Rica, Ecuador, El Salvador, Paraguay and Uruguay. There is also an observable tendency to eliminate general, indirect and hidden subsidies, although these are still necessary where an assisted market cannot function.

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<sup>14</sup> CEPAL, Cuadernos de la CEPAL *Evolución del Gasto Público Social en América Latina: 1980-95*, N°80 (LSG/1949P) Santiago, Chile, July, 1996.

In an effort to diversify the opportunities available for obtaining access to housing in accordance with the current and expected incomes of different types of households, efforts are being made to involve households more in the financing of their home. Joint financing and associative financing schemes and incentives to save for housing and pay back mortgages promptly when these have been taken out are applied on a graduated basis to social groups as and when rising incomes enable them to make some payment towards their housing.

## **F. SUPPORT FOR SQUATTER SETTLEMENTS**

Although the sectoral policies of the region are clearly slanted towards the production of new housing to deal with extreme poverty and irregular settlements, there is an increasing willingness to take action to bring inadequate housing gradually up to standard. Supported by international aid, programmes to provide basic infrastructure and expandable nuclei have enabled progress to be made in a great many marginal areas dating from the 1960s and 1970s, at cost levels that the countries and families have been able to cope with.

Even though two out of every three dwellings in Latin America and the Caribbean are owner occupied, national averages do not reflect the situation of the poorest layers of society, which have the highest proportion of irregular tenure. Given this, it is a welcome development that the countries are carrying through policies to regularize tenure in rural and urban sectors having makeshift housing, thus helping them to enter the development process. Consolidation of squatter settlements has generally taken place in conjunction with sanitation programmes that have improved their inhabitants' quality of life.

## **VI. HOUSING TECHNOLOGY**

### **A. PRODUCTION AND IMPROVEMENT OF HOUSING**

If the accumulated deficit and the faster rate of household formation are to be dealt with, a big technological effort is needed to achieve a substantial and sustained increase in the scale of housing production. Despite the work that the countries have done to enlarge their housing stock, ECLAC estimates that the production volumes achieved do not cover even a quarter of the fresh demand from new households, let alone the accumulated deficit.<sup>15</sup>

As regards the qualitative component of the housing deficit in Latin America and the Caribbean, which accounts for over 50% of the total deficit, housing strategies have hitherto addressed this in only a very limited fashion. Although for some time past non-governmental organizations, some local governments and communities have been carrying out interesting experiments in improving the quality of housing, there is little in the way of maintenance programmes for the existing stock, and the same is true of technological solutions on a massive scale to enlarge or repair housing, or simple mechanisms for financing and operating these improvements. Public efforts to give greater weight to the qualitative aspects of production, to ensure that new housing is sufficiently durable for the rate of obsolescence to be reduced and the costs of maintaining and running homes brought down are still at an initial stage.

### **B. NEW TECHNOLOGICAL REQUIREMENTS**

The main advances made as regards the efficiency of the Construction Sector are due to requirements imposed by the financing schemes currently used for housing production, rather than to a trend towards technological improvement as such. The elimination of some general supply subsidies, with others being made explicit, together with the high cost of money and the need to provide private investors with business conditions that are transparent and attractive, are in practice leading sectoral institutions and construction firms to revise the cost structure of housing, simplify bureaucratic procedures, reduce lead times and improve their systems for allocating and monitoring projects so as to bring down direct and indirect costs. Again, at meetings of Ministers and High-level Authorities of the Housing and Urban Development Sector, agreement has been reached on setting up a regional network to exchange technological information and knowledge (HABITEC).

Consideration of the adverse environmental, urban and social effects that have been produced by building large, uniform complexes of public housing, and the requirements produced by greater decentralization in the management of human settlements, cast doubt over the scales and styles of housing production adopted in conventional housing policies. It is believed that uniformity in the use of materials and designs that are often at odds with cultural and environmental realities are an impediment

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<sup>15</sup> ECLAC, *Human Settlements: The Shelter of Development*, op. cit.



to catering for the specific characteristics of different groups of beneficiaries or harnessing the native skills of the community in constructing a habitat.

Increasing incomes in most of the countries, and more specifically changes in housing expectations, even among those applying for public housing, mean that producers have to match up to ever more demanding standards of size, functionality, materials and equipment. Thus, although the size of the deficits prevailing in the region might still justify massive production to the most basic standards, those who devise housing policies are reluctant to sacrifice residential, urban and environmental quality for the sake of coverage and quantity.

Non-governmental organizations, which were strengthened during the authoritarian periods of the 1980s, have developed alternative technological approaches that in many cases are more sensitive to the environment and more open to participation by groups of beneficiaries such as young people, women, ethnic groups, etc., in the construction of their habitat. Furthermore, although very limited in scale, the work done by housing NGOs has traditionally supported the construction processes of the informal sector, instead of concentrating on formal production in the way public bodies do. With democratic governments once again in office in the different countries, the 1990s have seen forms of collaboration being sought between sectoral bodies and NGOs with the aim of synthesizing the demands of the public sector for large-scale production with the higher environmental and social quality standards urged by the other groups. These efforts to seek common ground between sectoral agencies, municipalities and private bodies have met with success in programmes carried out in Argentina, Bolivia, Ecuador, Chile, Colombia, Paraguay and Peru, among others, but they are still having considerable difficulty in achieving production volumes of a sufficient scale to make inroads into the shortfalls that exist in the region.

## **VII. ENVIRONMENTAL MANAGEMENT AND INFRASTRUCTURE**

Hitherto, the difficulties that governments have encountered in incorporating environmental objectives into their human settlement strategies have been of a political rather than a technological kind. Social and political agreement has been difficult to reach in areas which are especially sensitive to the interests of particular sectors. This is the case with regulation of the land market for the construction and real-estate sector, control of industrial pollution for urban businesses and industrialists, or measures to control vehicle congestion for the groups and individuals that might feel the convenience of these.

Due to the factors mentioned, there has been considerable delay in adjusting institutional mechanisms of control and management to make it possible for the private sector to share in the responsibility for the environmental costs arising from its production and real-estate activities. On the other hand, in most cases it has proved less difficult to tap into the technologies, knowledge and national and international experience required for specific urban environment issues to be tackled.

### **A. WATER AND SANITATION**

Most Latin American countries have made progress in the provision of sanitary cover, as shown in table 8. More than 50% of the population of most of the countries in the region now have access to drinking water and sanitation. The drop of more than 50% in child mortality recorded in the region between 1950-1955 and 1985-1990 can be attributed to the extension of basic sanitation coverage. Likewise, the installation of drinking water and sewerage systems in informal and rural settlements has meant that families have improved and enlarged their housing and living environment. In the Caribbean, for example, the scarcity of water resources makes it indispensable for both infrastructure and technology to be improved in order to increase water collection, reduce leakage and monitor contamination in the sources available.

As mentioned in Chapter IV, the coverage of sewage systems, which is lower than that of drinking water, ranges from 50% and over (in Chile, Colombia, Costa Rica, Mexico and Venezuela) to figures of under 25% of the housing stock (in Bolivia, Honduras and Paraguay). Rural dwellings are at a particular disadvantage in this respect. The percentage of population with access to drinking water and adequate sanitation also show the existence of a large urban-rural gap.

The problem of water and sanitation will not be solved by the provision of better infrastructure alone. A comprehensive strategy to improve urban sanitation would include upgrading the operation and maintenance of water supply systems, removing subsidies and price distortions that encourage waste, and public education.

Table 8  
HEALTH ACCESS IN THE REGION

Country	% of population with		Urban-rural disparity in access	
	Access to drinking water (1994-1995)	Access to adequate sanitation (1994-1995)	Drinking water (1994-1995)	Adequate sanitation (1994-1995)
Antigua Barbuda	95			
Barbados				
Belize	82	57		
Cuba	94	66	89	72
Dominica				
Grenada				
Guyana	65	90		
Haiti	28	24	62	38
Jamaica	86	89		80
Dominican Republic	79	85	48	109
Trinidad and Tobago	97	79	92	99
Costa Rica	100	99		94
El Salvador	62	73	49	71
Guatemala	62	60	47	72
Honduras	70	68	65	64
Mexico	87	70	68	24
Nicaragua	58	60	28	44
Panama	82	87		74
Argentina	71	68	38	51
Bolivia	60		28	44
Brazil	87	83		
Chile	96	71	39	
Colombia	96	70	76	43
Ecuador	70	64	67	68
Paraguay	35	41	48	46
Peru	60	47	32	43
Uruguay	75	61	6	108
Venezuela	88	59	94	47
Caribbean simple average	78.3	70.0	72.8	79.6
C. America simple average	74.4	73.9	51.4	63.3
S. America simple average	73.8	62.7	47.6	56.3
Regional simple average	75.4	68.3	54.2	64.6

Source: ECLAC, *The Equity Gap*, op cit.

## B. TREATMENT AND RECYCLING OF SOLID WASTE

The problem of urban waste has become a particularly important one for the management of cities in the 1990s, due to its effects on productivity and the quality of life in centres of population. With urbanization and the emergence of new patterns of production and consumption associated with economic growth, the volume of solid waste has increased dramatically in the cities of the region. At the same time, this waste has tended to be less compact and biodegradable, with non-organic refuse on the increase, and toxic substances now make up a higher proportion of it than hitherto. For 1995, the PAHO calculated that 275,000 tons of solid urban waste was generated in the Region each day, the collection and disposal of which entailed innumerable problems of an administrative,

logistical, financial and institutional nature, not only in the large urban centres, but in smaller settlements too.<sup>16</sup>

Box 9

**COMPREHENSIVE MANAGEMENT OF URBAN WASTE**

The pattern of development now obtaining in the cities of Latin America and the Caribbean in respect of population change and production activities makes the issue of industrial and household waste management a particularly pressing one. If solid urban refuse is to be efficiently managed, this issue needs to be approached comprehensively, and its various aspects considered. The project "Guidelines and Consultancy Services on Controlled Environmentally Sound Waste Management", carried out by the Environment and Development Division of ECLAC with collaboration from the Government of the Federal Republic of Germany through the German Cooperation Society (GTZ), shows that there are numerous problems of bad management and lack of waste control in the different countries, even though in many cases the technologies, knowledge and experience needed for adequate management are available. The work done in the framework of the project with some national governments (Brazil and Chile), regional governments (State of São Paulo) and municipal governments (Córdoba, Cartagena de Indias, Quito) has revealed that it is still only in a few situations that the problem is being approached comprehensively, with consideration being given to its legal, institutional, economic, financial, managerial, territorial, technological, educational and participatory aspects. As a result, priority needs to be given to assisting countries in introducing sound waste management into their urban and industrial policies in the context of sustainable development of human settlements over the coming years.

**Source:** ECLAC, Environment and Development Division: Project "Guidelines and Consultancy Services on Controlled Environmentally Sound Waste Management", Santiago, Chile, 1997.

Although the coverage of waste collection is on the increase and stands at 85% in the larger cities and between 50% and 70% in the smaller ones, there are still serious deficiencies in marginal urban areas (table 9). The statistics of Caribbean countries shows similar tendencies (table 10).

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<sup>16</sup> Francisco Zepeda: *El manejo de residuos sólidos municipales en América Latina y el Caribe. Segunda Reunión de Residuos Sólidos del Cono Sur*, in *Ingeniería Sanitaria y Ambiental* N° 22, October 1995.

Table 9  
SOLID WASTE COLLECTION AND COVERAGE IN LATIN AMERICAN AND CARIBBEAN CAPITALS AND IN SOME MAJOR CITIES

City	Pop. in millions	Waste/ton/day	Waste/pop/kg	Collection %	Landfill coverage (%) <sup>a</sup>			Type of responsible institution	Owns service or central
					Good	Regular	Bad		
<b>Caribbean</b>									
Havana(91)	2	1400	0,7	100	0	100	0	Municipal	Mixed
San Juan	0,8	1000	1,3	100	100	0	0	Municipal	
Sto.Domingo(94)	2,8	1700	0,6	65	0	0	100	Municipal	Private 85%
P.Spain(93)	0,5	400	0,8	98	0	100	0	E.M.A. <sup>b</sup>	Mixed
<b>Central America</b>									
San José(95)	1	960	1,0	90	100	0	0	Municipal	Municipal
S.Salvador(92)	1	700	0,7	60	0	0	100	Municipal	Municipal
Guatemala(92)	1,3	1200	0,9	80	0	0	100	Municipal	Mixed
Tegucigalpa(95)	1	650	0,7	75	0	0	100	Municipal	Municipal
Managua(88)	1	600	0,6	70	0	0	100	Municipal	Municipal
A.M.Mexico(93)	17	14000	0,8	80	50	25	25	Municipal	Municipal
Panama(95)	0,8	770	1,0	90	0	0	0	Municipal	Municipal
<b>South America</b>									
A.M. B. Aires	12	12000	1,0	100	100	0	0	E.M.A.	Private 97%
La Paz(93)	0,7	300	0,4	95	100	0	0	E.M.A.	Private
A.M. S. Paulo(93)	16	12000	0,8	95	100	0	0	Municipal	Private
R de Janeiro(87)	5	5000	1,0	95	0	100	0	E.M.A.	Municipal
Bogotá(94)	5,5	4200	0,8	92	100	0	0	E.M.A.	Private 87%
Medellín(87)	1,6	750	0,5	95	100	0	0	Municipal	
Cali(94)	1,6	800	0,5	90	0	0	100	E.M.A.	Municipal
Santiago(94)	5	3200	0,6	100	100	0	0	E.M.A.	Private
Quito(94)	1,3	900	0,7	85	0	0	100	E.M.A.	Municipal
Guayaquil(92)	2	1300	0,7	50	0	0	100	Municipal	Mixed
Asunción(93)	1	550	0,6	75	0	0	100	Municipal	Mixed
A.M. Lima(94)	6,5	4000	0,6	60	0	40	60	E.M.A.	Municipal
Montevideo(91)	1,3	900	0,7	95	0	0	100	E.M.A.	Municipal
Caracas(88)	4,3	4000	0,9	95	0	100	0	E.M.A.	Private
<b>Total/average</b>	<b>93</b>	<b>73880</b>	<b>0,8</b>	<b>85</b>	<b>34</b>	<b>23</b>	<b>43</b>	<b>E.M.A.=45% Mun.=&lt;50%</b>	

**Source:** Zepeda, Francisco, *El manejo de residuos sólidos municipales en América Latina y el Caribe. Segunda Reunión de Residuos Sólidos del Cono Sur*, Ingeniería Sanitaria y Ambiental N°22, October, 1995.

<sup>a</sup> Good: sanitary landfill; regular: controlled landfill; bad: open dump; <sup>b</sup> municipal garbage company.

Table 10  
SOLID WASTE COLLECTION AND COVERAGE IN SOME CARIBBEAN COUNTRIES

Country	Pop. in millions	Waste ton/pop.	Waste/pop/ year m <sup>3</sup>	Collection coverage %	Landfill coverage(%)			
					Sanitary landfill	Incinerated	Open dump	Recycled
Anguilla	0,9	1,10	3,6	80	100			
Antigua & Barbuda	5,9	0,40		100	15	20	5	
Barbados	26,2	0,35	2,1	100	84,2	6	1	8,8
BVI	7,1			100	13	81	6	
Dominica	9,6	0,14	0,4	90	13	81	6	
Grenada	7,1	0,33		85			60	
Nevis	0,9	0,22	0,6	98			100	
St Lucia	13,3	0,25	0,3	63			100	
Turks&Caicos	1,1			80	80		29	10

Source: UNCHS national-level indicators (without year).

In addition, amongst existing sanitary landfills many are open dumps, which are considered inferior type of sanitary landfill. Due to rapid urban expansion and high land prices, which make it difficult to locate final waste disposal sites, transfer stations are being established in Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Peru and Venezuela, and other countries are ready to follow their example.<sup>17</sup> Progress has been made in respect of sanitary dumps, but these are concentrated in a group of more developed cities, while questionable means are still used to dispose of rubbish in medium-sized and smaller cities. On the other hand, there are numerous local and national programmes to raise awareness in communities and motivate them to become involved in the different stages of the waste management process, such as separating waste by categories, organizing informal sector workers, and consciousness raising. This is happening in the cities of Bogotá, Caracas, Curitiba, Lima, and Recife, among others. There are also attempts to incorporate the private sector in services such as collection, transport, and disposal, which traditionally have been the responsibility of local governments. For instance, Chile and Venezuela privatized all the waste services, whereas Argentina, Colombia and the Dominican Republic partially privatized waste services.<sup>18</sup>

Urban industrial waste is also having a major environmental impact on many cities in the region. Environmentally appropriate management of this type of refuse is difficult to achieve because of the lack of political and urban awareness of the problems generated by industrial waste products, the inadequacy of data for measuring them and the scarcity of conceptual and human resources for establishing policies in this area.

### C. AIR POLLUTION AND URBAN TRANSPORT

The urban transportation-related problems in today's cities stem from a number of interrelated factors. Transportation and automobile-related air pollution constitutes the fastest growing component of urban air problems in the region. It has been estimated that

<sup>17</sup> ECLAC, *Human Settlements: The Shelter of Development*, op. cit.

<sup>18</sup> ECLAC, *Human Settlements: The Shelter of Development*, op. cit.

approximately 50% of emissions in carbon monoxide, hydrocarbons and nitrogen oxide are generated from fossil fuels used in diesel engines.<sup>19</sup> In highly congested streets, vehicle transit is responsible for 90-95% of the carbon monoxide in the air, and for 80-90% of the nitrogen oxide and carbon hydrate, which are harmful to human beings and the environment.<sup>20</sup> For example, in Santiago (Chile) 75% of contaminated emission is caused by motor vehicles.<sup>21</sup> The poor suffer more from air pollution and congestion given their longer commuting times.<sup>22</sup>

In this respect, the level of motorization of cities is of great importance. Car ownership is sparked by both increasing incomes and urbanization and is expected to skyrocket (see table 11). The Latin American and Caribbean region has a relatively lower level of motorization compared to other regions in the world, but considering the speed of increase, the gravity of problems may become even more serious.

Table 11  
MOTORIZATION RATE FOR SOME CITIES IN LATIN AMERICA

City	Country	Total number of cars	Cars per 100 inhabitants	Data date
Buenos Aires	Argentina	2.340.000	18,9	1991
La Paz	Bolivia	110.000	10,0	1995
Belo Horizonte	Brazil	225.000	12,6	1989
Brasilia	Brazil	172.000	14,6	1989
Critiba	Brazil	207.000	20,0	1989
Porto Alegre	Brazil	177.000	15,7	1989
Recife	Brazil	134.000	11,1	1989
Río de Janeiro	Brazil	1.184.600	21,6	1995
Salvador de Bahía	Brazil	111.000	7,4	1989
São Paulo	Brazil	4.330.000	24,3	1992
Bogotá	Colombia	490.000	8,3	1994
Medellín	Colombia	350.000	14,8	1992
Santiago	Chile	405.000	9,0	1991
San Salvador	El Salvador	120.000	8,2	1995
Mexico	Mexico	2.390.000	15,8	1991
Monterrey	Mexico	477.000	14,1	1992
Asunción	Paraguay	17.000	14,2	1995
Lima	Peru	262.000	4,4	1989
Santo Domingo	Dominican Rep.	115.000	9,6	1995
Montevideo	Uruguay	330.000	20,2	1995
Caracas	Venezuela	546.000	21,8	1987
LA and C			6,8	1993

Source: Oscar Figueroa and Sonia Reyes, "Transporte y Calidad de Vida en las Ciudades Latinoamericanas", en *Revista EURE* (vol.XXII, N° 67), pp 29-44, Santiago, Chile, December 1996.

<sup>19</sup> WRI, UNEP, UNDP, World Bank, *World Resources 1996-97*, Oxford University Press, 1996.

<sup>20</sup> Figueroa, Oscar y Reyes Sonia, *Transporte, Uso del Suelo y Contaminación Urbana en las Ciudades Latinoamericanas*, paper presented in the Seminar "Planeamiento y Gestión Urbana Estratégica en América Latina", June 26-28 1996, Santiago, Chile.

<sup>21</sup> WRI, UNEP, UNDP, World Bank, *World Resources 1996-97*, Oxford University Press, 1996.

<sup>22</sup> Thomson, Ian, "The Transportation Systems of Latin American Cities: How they might better serve the needs of the Poor" in *Enhancing the Management of Metropolitan Living Environment in Latin America*, UNCRD, 1994.

**PROBLEM OF EQUITY IN TRANSPORTATION**

In 1993, the motorization ratio for the Latin American and Caribbean Region was 6.8 cars per 100 persons,\* having increased significantly from 2.6 in 1970. The number is much higher for the large cities. In São Paulo in 1992, 24.3 per 100 persons; in Caracas in 1987, 21.8 per 100 persons; in Rio de Janeiro in 1995, 21.6 per 100 persons; and in Montevideo in 1995, 20.2 per 100 persons.\*\* Such increase in motor vehicles without regulation coupled with bad alternative transportation systems worsen congestion, and air and noise pollution as well.

In addition, this increase in motorization reflects the inequality of the income distribution in the region. The motorization rate is much higher in rich districts than in poor districts, as is illustrated below:

Motorization Rate in Poor and Wealthy Districts					
City	N° of vehicles for 100 inhabitants	Most poor districts	Motorization rate	Most wealthy districts	Motorization rate
Buenos Aires (Argentina)	18.9	Moreno F.Varela	5.3	C. Federal	34.6
			5.6	V. López	33.6
				San Isidro	27.9
Bogotá (Colombia)	8.3	Usme C. Bolívar Candelaria	1.3	Chapinero	29.6
			1.9	Usaquén	20.0
			2.2	Teusaquillo	
Santiago (Chile)	9.0	La Pintana Huechurab a Cerro Navia	1.1	Vitacura	36.1
			2.1	Las Condes	29.4
			2.7	Providencia	27.6

**Source:** Figueroa and Reyes, "Transporte y Calidad de Vida en las Ciudades Latinoamericanas", in *Revista EURE* (Vol. SSII N° 67), pp 29-44, Santiago, Chile, December 1996.

In forming the policy, it is important to clarify 'how much' and 'who' pays for the inconveniences and damages caused on the environment. The case of transport illustrates difficulties in tackling the problem of environment separately from other issues such as social, economic, and infrastructure.

\* American Automobile Manufacturers' Association (AAMA), *World Motor Vehicle Data 1995 Edition*, Detroit, 1995.

\*\* Figueroa and Reyes, "Transporte y Calidad de Vida en las Ciudades Latinoamericanas", in *Revista EURE* (Vol. SSII N° 67), Santiago, Chile, December 1996.

While energy policies are generally considered to be the responsibility of national governments, cities are in a position to help lower energy consumption. Cities can use several tools in their quest to lower energy demand, such as public education on the need for and benefits of energy conservation and the options available to residential and commercial energy users and improving public transportation.

According to UNEP, 20% of all energy produced is used for transportation. Hence transportation policy is of importance for energy policies.

The increase in car ownership in the region has contributed greatly to the increase in congestion, a problem which the cities in the region have yet to solve. In Rio de Janeiro, Quito, La Paz and Santiago the problems of congestion are persisting even



through major road schemes are being constructed and upgraded, and efforts are being made to involve the private sector in financing and administering them. Attempts to resolve the problem by improving public transport systems have entailed heavy investment in underground and suburban railways in Brasilia, Caracas, Lima, Mexico City, Santiago, São Paulo and other cities. Given the high costs of building and operating suburban trains, some cities are focusing on other alternatives such as, for example, improving surface transportation systems, which have proved more appropriate. In Brazil, the city of Porto Alegre opted to run buses in segregated lanes or roads, and the integrated system used in Curitiba involves different types of buses, including double articulated ones with a large carrying capacity, which run on a network of dedicated roads. In the Curitiba model, furthermore, transportation measures are complemented by others dealing with land use regulation, tariff systems and the financing of companies.

Road charging, parking controls, the staggering of business hours and the prohibition of vehicle use on a rotating basis using the last digit of the vehicle number plate are other options being considered by local and national authorities to control congestion, though their effectiveness needs to be evaluated before they are applied on a large scale in different urban contexts. One thing that many countries have yet to do is to link specific urban transportation investment and operation functions more closely with more general urban and land management functions when decisions come to be taken on ways to help improve urban access.

#### **D. INFRASTRUCTURE FINANCING**

Between the 1950s and the 1970s, national authorities had the sole or main responsibility for investing in urban infrastructure and for operating and maintaining services, and the limitations within which they worked generated in this decade a range of critical problems which are now affecting sustainability and competitiveness. In accordance with the modernizing and privatizing tendencies prevailing in the region in the 1990s, the creation of infrastructure is regarded more as an issue of service provision than one of physical capital. As a result, payment by users, set off against the costs associated with providing this service, should be able to cover the expense of expanding and operating the infrastructure. As this approach means that services can recover their costs and be profitable, it has become easier for private funding to be involved in the production and management of infrastructure. Nonetheless, there are still problems to be resolved in ensuring that those who can pay do pay, and to establish appropriate and transparent subsidies for those households that are unable to pay the tariffs set. Initiatives to introduce charging for services have had political costs at the outset, as they alter the practice whereby the State has met maintenance costs and even subsidized consumption in what has often been a regressive way. Nonetheless, once the quality of the service has improved or its coverage increased, these measures have been accepted by the population.

#### **E. PARTICIPATION AND URBAN ENVIRONMENT**

On the path to sustainable development in settlements, there are a range of initiatives that can promote participation by users in decisions relating to the management of their neighborhood and city. These practices need to be incorporated into institutional models capable of being applied on the massive scale that characterizes the cities of Latin

America and the Caribbean. Particular mention must be made of the work done by bodies such as the Urban Management Programme, in its regional section, the Sustainable Cities Programme, with one project operating in Chile and a number of others to be added, which is described in box 11. The International Council for Local Environmental Initiatives (ICLEI) has also been supporting the implementation of Programme 21 at a local level in the Region, with schemes in Peru, Mexico and Ecuador. The aim of these initiatives is to develop new forms of management able to take a concerted approach to identifying the problems faced by cities and then establish permanent working and decision-making spaces for the different actors on the urban scene.

Box 11

**PARTICIPATORY MODELS FOR SUSTAINABLE URBAN MANAGEMENT**

Since 1993, within the framework of the Programa de Ciudades Sustentables [Sustainable Cities Programme] of the United Nations Centre for Human Settlements, the project "Gestión de Desarrollo Sustentable Intercomunal de Concepción" has been in progress in the city of Concepción on the Chilean coast. This project, which so far is the only initiative being supported by the Programme in the Region, aims to secure effective participation by the key players in the public, private and social sectors in the environmental urban planning and management of this urban complex. Workshops were held with broad citizen participation, and in the first stage the main social, economic and environmental problems afflicting the city were identified by representatives from the municipality, the public sector, private businesses and local leaders and the like as being rising poverty, pollution of watercourses and bays, and a lack of sanitary infrastructure. Building on the work done in this process, the next step was to establish the Agencia de Gestión Urbana, with a board headed by the Mayor of Concepción, comprising academic authorities, and a team of expert advisers in the same municipality. Concrete undertakings were also reached to implement environmental initiatives in urban areas, addressing issues about which people in the community felt particularly strongly: water decontamination, prevention and handling of industrial emergencies, poverty relief and the development of tourism, among other things.

**Source:** United Nations Centre for Human Settlements: Sustainable Cities Programme.

## VIII. SUSTAINABLE DEVELOPMENT OF HUMAN SETTLEMENTS

After the "painful learning decade", as the 1980s are generally called due to the revisions that were needed in this and other areas of public policy as a result of adjustment policies and their effects on the societies of Latin America and the Caribbean, in the first half of the 1990s the countries set themselves to deal with urban and housing processes, laying emphasis on social and economic aspects. Urban poverty, segregation and the housing deficit were and still are among the basic concerns of the public and private bodies associated with the sector. In their search for efficiency and effectiveness, the countries moved towards a high degree of specialization and sophistication in sectoral apparatus and instruments. At the same time, in view of the profound transformations experienced by the economies of the countries, there was growing awareness of the importance of cities and urban systems as spaces and territories whose attributes and processes can be favourable or unfavourable to economic progress. The high degree of urbanization in the region was no longer regarded as a negative aspect, and efficient management of human settlements came to be seen as a desirable condition from an economic standpoint.

Now in the second half of the 1990s, interesting changes of emphasis can be observed in human settlement policies. The debate about managing urban and housing problems has incorporated the environmental aspect more decisively. This is due in part to the worsening of environmental problems in most cities, which is endangering not only the quality of life of their inhabitants but productivity and competitiveness as well. As high levels of urbanization are attained, the concentration of people and activity in urban spaces means that air pollution, vehicle congestion and waste disposal are issues that have to be tackled with some urgency. As citizens have perceived these problems, management of the urban environment has taken on great political importance.

Thus, the importance of environmental issues in urban development and housing policies means that new forms of action are arising in the sector in this second half of the decade. In fact, although certain environmental problems are particularly harmful to lower-income groups, others do not distinguish between rich and poor, and this is true of vehicle congestion and air pollution. Generally speaking, for the urban environment to be improved, all citizens need to be involved, and the different sectors need to be united around a common programme of action. In this context, the role of local government, with its ability to administer the urban space, coordinate sectoral initiatives and open up opportunities for the inhabitants to share in the management and progress of their city, has grown in importance.

As the decade nears its end, analysis of the progress achieved through urban and housing policies suggests that there is still a great deal of work to be done in increasing both the scope and the degree of specialization of action in the financial, social and institutional areas, among others. Nonetheless, over and above this need for progress in specific areas, it seems that in the coming years success in achieving greater effectiveness and efficiency in the management of human settlements will depend on the ability to embrace and complement the different aspects and levels that make up the real life of human settlements. Only in this way does it appear possible to create the

cumulative and synergetic effects required for sustainable development of the Latin American and Caribbean habitat in the next few years.

## APPENDIX

Table A-1  
**% OF URBAN POPULATION IN LATIN AMERICA AND THE CARIBBEAN: 1970-1997**

	Country	% of urban population			
		1970	1980	1990	1995
<b>Caribbean sub-region</b>	Anguilla	10	10	10	11
	Antigua and Barbuda	34	35	35	36
	Aruba	-	-	-	-
	Bahamas	72	75	84	87
	Barbados	37	40	45	48
	Belize	51	49	48	47
	British Virgin Islands	29	39	50	57
	Cayman Islands	100	100	100	100
	Cuba	60	68	74	76
	Dominica	47	63	68	70
	Dominican Republic	40	51	58	63
	French Guiana	67	71	75	77
	Grenada	32	33	34	36
	Guadeloupe	75	89	99	100
	Guyana	29	31	33	36
	Haiti	20	24	29	32
	Jamaica	42	47	52	54
	Martinique	61	80	91	94
	Montserrat	11	12	15	17
	Netherlands Antilles	68	68	68	69
	Puerto Rico	58	67	71	74
Saint Kitts and Nevis	34	36	35	34	
Saint Lucia	40	37	37	37	
Saint Vincent and the Grenadines	15	27	41	48	
Surinam	46	45	47	50	
Trinidad and Tobago	63	63	69	72	
Turks and Caicos Islands	41	42	43	44	
United States Virgin Island	45	45	45	45	
<b>Central America sub-region</b>	Costa Rica	40	41	47	50
	El Salvador	39	42	44	45
	Guatemala	36	37	38	39
	Honduras	29	35	41	44
	Mexico	59	66	73	74
	Nicaragua	47	53	59	63
	Panama	48	50	54	56
<b>South America sub-region</b>	Argentina	78	83	87	88
	Bolivia	41	46	56	61
	Brazil	56	66	75	79
	Colombia	57	64	70	73
	Chile	75	81	83	84
	Ecuador	40	47	55	60
	Paraguay	37	42	49	53
	Peru	57	65	69	71
	Uruguay	82	85	89	91
	Venezuela	72	79	84	86
	Caribbean Simple Average	45	50	54	56
	Central America Simple Average	50	54	59	62
	South America Simple Average	66	73	80	83
	LA y C Simple Average	45	50	54	56
	LA y C Weighted Average	57	65	71	73

Source: UN World Urbanization Prospects: The 1996 Revision (Preliminary version 1997).

Table A-2  
**LATIN AMERICA AND THE CARIBBEAN:  
 DISTRIBUTION OF URBAN POPULATION BY CITY SIZE**

Year	Less than 500,000	500,000 to 1 million	1 to 5 million	5 to 10 million	10 million and +
1950	70.5	5.1	17.1	7.3	0.0
1960	63.0	6.3	19.3	11.4	0.0
1970	57.8	7.5	14.7	20.0	0.0
1980	54.3	8.3	18.2	8.0	11.3
1990	53.5	7.2	19.3	6.7	13.3
2000	47.3	9.0	23.5	5.0	15.2
2010	45.4	7.9	28.2	4.9	13.7
2015	45.4	8.2	27.5	5.8	13.1

Source: United Nations, *World Urbanization Prospects, The 1996 Revision*.

Table A-3  
**LATIN AMERICA: RATE OF URBAN UNEMPLOYMENT AND GDP PER CAPITA  
 1990-1995 (IN 1990 DOLLARS)**

Country	Rate of urban unemployment				GDP per capita			
	1990	1992	1994	1995	1990	1992	1994	1995
Argentina	7.5	7.0	11.5	17.5	4 371	5 038	5 606	5 298
Bolivia	10.2	5.4	3.1	3.6	778	812	847	856
Brazil	4.3	5.8	5.1	4.6	2 707	2 586	2 759	2 819
Chile	6.5	4.9	6.3	5.3	2 320	2 656	2 836	3 021
Colombia	10.5	10.2	8.9	8.9	1 247	1 273	1 375	1 431
Costa Rica	5.4	4.3	4.3	5.7	1 881	1 961	2 069	2 074
Guatemala	6.1 <sup>a</sup>	5.7	5.2	4.3	831	855	874	891
Honduras	7.8	6.0	4.0	4.6	686	701	698	700
Mexico	2.9 <sup>a</sup>	2.8	3.7	6.3	2 860	3 017	3 038	2 790
Panama	20.4 <sup>a</sup>	19.3	16.0	16.2	2 124	2 384	2 610	2 614
Paraguay	6.6	5.3	4.4	5.2	1 220	1 198	1 214	1 231
Peru	8.3	9.4	8.8	7.1	1 657	1 628	1 896	2 007
Uruguay	8.5	9.0	9.2	10.3	2 975	3 272	3 570	3 452
Venezuela	11.0	8.1	8.9	10.9	2 495	2 769	2 600	2 602

Source: ECLAC Social Panorama 1996.

<sup>a</sup> 1989 figure.

Table A-4  
**LATIN AMERICA AND THE CARIBBEAN (19 COUNTRIES) HOUSEHOLDS AND DWELLINGS,  
 AROUND 1990**

Country	Year	Estimated	Private	Adequate	%	Dwellings	%	Repairable	%
Argentina	1991	9 380 204	8 554 695	6 434 209	75.2	624 274	7.3	1 496 212	17.5
Bolivia	1992	1 614 995	1 614 995	880 172	54.5	406 979	25.2	327 844	20.3
Brazil	1991	35 517 542	34 734 715	19 490 609	56.1	5 098 394	14.7	10 145 712	29.2
Chile	1992	3 365 462	3 120 967	2 394 995	76.7	364 760	11.7	361 212	11.6
Colombia	1985	5 824 857	5 251 273	3 303 051	62.9	525 127	10.0	1 423 095	27.1
Costa Rica	1984	527 299	500 030	339 840	68.0	43 804	8.8	116 386	23.3
Cuba	1981	2 350 221	2 290 176	1 698 649	74.2	335 427	14.6	256 100	11.2
Ecuador	1990	2 136 889	2 008 665	1 375 212	68.5	296 609	14.8	336 834	16.8
El Salvador	1992	1 091 728	1 049 191	508 858	48.5	359 873	34.3	180 461	17.2
Guatemala <sup>a</sup>	1994	1 591 823	1 553 708	552 934	35.6	290 863	18.7	709 911	45.7
Honduras	1988	808 222	762 117	481 658	63.2	90 921	11.9	189 767	24.9
Mexico	1990	17 394 368	16 035 233	11 382 906	71.0	1 964 712	12.3	2 687 615	16.8
Nicaragua	1991	---	639 531	128 545	20.1	289 994	45.3	220 992	34.6
Panama	1990	541 704	524 284	365 650	69.7	86 268	16.5	72 366	13.8
Paraguay	1992	873 694	855 547	517 578	60.5	143 080	16.7	194 889	22.8
Peru	1993	4 762 779	4 427 517	2 231 469	50.4	872 221	19.7	1 323 828	29.9
Dominican R.	1993	534 827	533 247	326 991	61.3	6 990	1.3	199 266	37.4
Uruguay	1985	902 300	823 253	685 934	83.3	40 998	5.0	104 553	12.7
Venezuela	1990	3 750 940	3 517 229	2 672 168	76.0	529 702	15.1	315 359	9.0
L A and C		92 969 854	88 796 373	55 771 428	62.8	12 370 996	13.9	20 662 402	23.3

Source: ECLAC, Human Settlements, The Shelter of Development, op. cit.

<sup>a</sup> Includes only the 19 countries, which account for 96,15% of the region's population.

Table A-5  
**LATIN AMERICA (SIX COUNTRIES), CHANGES IN LEVELS OF SANITATION  
 URBAN AREAS, 1992-1994<sup>a</sup>**

Country	Year	% of population living in urban housing									
		No access to basic sanitation					Not supplied with drinking water				
		Total	Income quartiles				Total	Income quartiles			
	1	2	3	4		1	2	3	4		
Brazil	1990	49.9	72.6	54.3	39.0	25.0	18.7	40.0	17.3	7.7	3.1
	1993	54.7	73.9	56.8	44.9	33.0	17.1	33.1	15.5	8.6	4.0
Chile	1990	15.8	28.4	17.0	9.7	3.4	2.7	6.0	2.5	1.2	0.1
	1994	13.1	26.0	12.9	6.1	3.1	1.5	3.4	1.3	0.5	0.2
Colombia	1990	6.6	14.6	6.7	2.5	0.3	1.7	4.1	1.5	0.5	0.1
	1994	6.5	14.4	6.1	2.9	0.8	1.7	3.3	1.7	0.8	0.6
Honduras	1990	52.0	73.0	61.8	47.1	17.4	19.3	24.8	23.9	18.9	6.7
	1994	45.5	70.8	52.4	33.7	16.1	14.7	23.4	18.8	9.9	3.4
Mexico	1989	22.4	35.4	21.8	16.0	9.7	7.4	14.4	6.6	3.5	1.6
	1994	20.3	35.9	18.0	12.4	6.8	7.2	16.0	4.9	2.5	1.0
Paraguay <sup>b</sup>	1990	63.7	85.6	71.4	54.9	32.3	33.3	52.9	35.2	27.6	9.0
	1994	72.8	91.7	81.1	67.9	41.4	34.0	51.5	39.5	27.0	10.5

Source: ECLAC, *Social Panorama 1996*.

<sup>a</sup> Until 1992 it covered around half of this population; since 1993, the geographical coverage of the survey has been increased to include virtually all of the urban population in the country concerned; <sup>b</sup> Corresponds to Asuncion and urban areas of the Central Department.



Table A-6  
 LATIN AMERICA AND THE CARIBBEAN. LEVELS OF SANITATION IN  
 RURAL AREAS <sup>a</sup> : 1983-1993 (15 countries)

Country	Year	Access to piped water (%)	Access to sewerage system or septic tank (%)
Bolivia	92	19.75	0.77
Brazil	91	9.44	9.35
Chile	92	42.38	13.91
Cuba	81	35.96	...
Ecuador	90	40.13	8.93
El Salvador	92	28.12	2.94
Guatemala	89	49.64	8.44
Honduras	88	47.47	8.08
Mexico	90	49.61	13.64
Paraguay	90	59.20	11.88
Panama	92	3.04	14.11
Peru	93	7.12	0.00
Dominican Rep.	81	32.29	5.72
Uruguay	85	9.00	34.8
Venezuela	90	48.72	39.91
Region		25.34	10.28

Source: ECLAC, *Human Settlements, The Shelter of Development*, op. cit

<sup>a</sup> Percentage of inhabited dwellings with access to the services concerned.

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