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Strategic Framework for Urban Strategy Development in Ecuador

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EXECUTIVE SUMMARY

This report has been prepared to provide USAID/Ecuador with an initial strategic framework to help guide it in developing an urban strategy. The report reviews Ecuador's past and prospective macroeconomic performance and the major development challenges of the 1990s; urbanization trends, including incidence of urban poverty; GOE policies and programs; and the role of other donors. Six major themes for the Mission's urban strategy development are recommended. These are consistent with a set of evaluation criteria for assessing alternative strategies.

Ecuador's Development Challenges in the 1990s

The report identifies seven main areas in which the current and succeeding Ecuadorean governments will be challenged, during the 1990s, in their efforts to restore growth and development to an economy that has been frustrated for much of the last 10 years. Addressing these challenges constructively will call forth a basic set of policy responses that are essentially invariant — except perhaps in emphasis and degree — across the range of political ideologies that are likely to influence governmental thinking in Ecuador in the next few years. The recognition of these challenges and the policy responses required to meet them will provide a framework for considering the current urban economy and what is to be done to begin the process of developing an effective urban strategy. The major development challenges are the following:

Generating employment. Continued rural-to-urban migration and the growth and reclassification of small towns will result in the urban population growing at 3.9 percent per annum during this period. Most striking of all, the urban economically active population is projected to grow at 4.4 percent per annum, due to a changing age structure of the population, selective migration, and increasing rates of participation in the labor force. During the decade just begun, the urban sector will have to provide three out of every four new jobs needed to employ new entrants into the work force.

Developing human resources. An effective development strategy must not only stimulate the growth that can provide productive employment, but it must also prepare new entrants to the labor force to be productive.

Improving fiscal performance. The destabilizing consequences of erratic fiscal performance have become all too apparent in Ecuador during the 1980s. One of the key challenges for the current and succeeding governments during the 1990s will be the further consolidation of efforts to slow the growth of government expenditures while broadening and diversifying the revenue base to provide government with a more stable and predictable income.

Maintaining price and exchange-rate stability. Closely linked to the issues of fiscal management discussed above, is the need to restore and maintain price and exchange-rate stability to the Ecuadorean economy.

Promoting growth and diversification of exports. While Ecuador must not neglect the further development of its traditional commodity exports, it must also emphasize diversification of the productive base of the economy through the development of new export products.

Financing capital investment. The reactivation and articulation of the private sector economy of Ecuador during the 1990s will require major increases in both private and public investment. Government policy must aim at restoring business conditions and the business climate to the extent necessary to ensure this outcome.

Improving the quality of life. Clearly, all future Ecuadorean governments must be concerned with improving the quality of life for Ecuadorean citizens, especially the rural and urban poor and those who do not yet have access to basic education and health services. The governments must also be concerned with the preservation of the country's environmental resources.

One of the tests that must be passed by any proposed element or component of an urban strategy is that it contribute to the achievement of some clearly defined objective in one or more of the above areas without materially slowing progress on any of the other main fronts. For example, proposals for generating employment must not negate GOE's efforts to improve fiscal performance or to maintain price and exchange rate stability. Finding the appropriate balance between objectives in each of the above areas is the main challenge in designing a responsive urban strategy for development assistance in Ecuador.

Criteria for Strategy Assessment

Six criteria are proposed for assessing urban strategy alternatives:

- Relevance to principal economic development objectives, especially that of alleviating poverty
- Relation to other donor programs
- Relation to the comparative advantages and strengths of A.I.D.
- Financial feasibility
- Political feasibility in relation to GOE priorities
- Institutional feasibility

Themes of a USAID/Ecuador Urban Program

Six broad elements, or "themes," of an urban development strategy for Ecuador have been identified. Each contributes in a substantial way to the alleviation of poverty in both urban and rural areas. The six themes listed below are fully consistent with A.I.D. policy as enunciated in the Agency's report to Congress, dated February 14, 1989, and entitled "Urbanization in the Developing Countries."

Theme 1: Supporting sound economic development policies. In the context of implementing a broad urban strategy in Ecuador, assistance in the areas of macroeconomic policy, employment and labor policy, financial sector policy, trade policy, human resource development policy, and public sector organization and management policy is relevant, needed, and likely to be well received. A.I.D. is well positioned to supply technical assistance in policy analysis and dissemination.

Theme 2: Generating urban employment. A.I.D. has extensive experience in the design and implementation of micro- and small-enterprise development projects, vocational skills training projects, private sector organizational development and advocacy projects, and export and investment promotion projects. Projects such as these aim at facilitating, over the medium term, structural changes that tend to favor job creation primarily through fostering sustainable economic growth.

Theme 3: Promoting efficient urban management. The present decade is almost certainly going to be characterized by extremely tight resource constraints for public administrations at all levels. Municipal and other forms of local government in Ecuador have a critical role in expanding resource mobilization, especially by greatly improving their cost recovery performance in the delivery of urban services and by significantly improving the efficiency of resource utilization at the local level.

Theme 4: Mobilizing resources to finance urban development. Development assistance in this area falls into two major categories: public finance, including the local level, and financial market development, with emphasis on the capital markets. Both are areas in which A.I.D. has significant experience and resources to offer through policy dialogue, technical assistance, and project financing.

Theme 5: Improving rural-urban linkages. A.I.D. and other donors have substantial experience providing technical and project assistance aimed at improving rural-urban linkages, though not all of the activities undertaken are recognized as having this effect. The most obvious examples of such assistance include transportation, storage, and communications infrastructure projects in rural areas. Other, less obvious examples of improvements in rural-urban linkages include rural education programs, private sector institutional development, marketing extension, urban nutrition programs, and small-enterprise development.

Theme 6: Improving the quality of life and preserving the environment. Shelter, water, and sewage system construction projects come immediately to mind when considering initiatives encompassed by this theme, but so do improved urban transportation systems, extension programs in the appropriate use of agricultural chemicals, and the introduction of rational controls and reasonable alternatives for developing agriculture in the Amazon region of the country.

Requirements for Further Data Collection and Analysis

Implementation of an urban development strategy will involve a great deal of continuing research and analysis on a range of subjects too wide to be specified now. The further studies proposed here are not aimed at implementation, but at providing the additional information that RRNA believes would help USAID/Ecuador refine and complete the urban development strategy that it is engaged in preparing. RRNA has consciously tried to keep the number of additional studies to a minimum, and the firm proposes three, which are described briefly below.

The role of the private sector in urban services. An investigation into the present and future potential role of the private sector in the financing and/or the provision of urban services is proposed. Electricity distribution, urban transport, market facilities, garbage collection, and other services have been successfully organized and managed by private companies in a number of countries, and these are candidates to be privatized in Ecuador.

Alternatives roles for local government. A study describing in some detail the current division of authority and functions between the national, provincial, and municipal levels of government should be undertaken. This would provide a basis for evaluating the desirability of moving towards some fundamental reallocation of powers and responsibilities between the various levels of government in Ecuador with respect to financing and providing urban services.

Research into urban poverty and the nature of rural-urban economic linkages. Reliable statistical information on income levels and income distribution in urban areas is grossly inadequate, as is information on the correlation of income with a variety of quality-of-life indicators relating to shelter and access to urban services. Improved availability of such information is a prerequisite for program planning and implementation in the urban areas of Ecuador.

I. DEVELOPMENT OF THE URBAN ECONOMY IN ECUADOR

Economic Background, 1973 to 1983

The Ecuadorean economy underwent a radical change in its social and productive structures with the arrival of the era of petroleum exports in 1973. Real GNP increased by more than 60 percent from 1973 to 1983, while exports increased by more than 400 percent, from US\$ 238 million to more than US\$ 1.2 billion.

The increased availability of foreign exchange permitted the maintenance of an overvalued sucre for almost a decade. Foreign exchange earnings permitted sustained development, albeit with a high level of imports of raw materials and capital goods to supply an overprotected industrial sector, which was inefficient and principally oriented to internal markets. Thus, between 1970 and 1982, the ratio between import prices and domestic prices dropped from 104 to 74 (index 100 in 1975), while the ratio between export prices and domestic prices fell from 102 to 41.¹

A policy of fixed exchange rates also contributed to a loss of dynamism, which was most noticeable in the agricultural sector. Internal production was discouraged by low real prices that tended to favor consumers at the expense of rural producers and that provided little incentive to generate exportable products. As a result, between 1973 and 1980, the industrial sector, which is concentrated in large cities, increased its share in GNP by four percentage points from 14 percent to 18 percent. The corresponding decline of the agricultural sector is evident from the terms of trade between the agricultural and industrial sectors, which fell from an index of 100 in 1975 to 87 in 1982.

From a monetary and financial viewpoint, the elevated availability of resources also helped to support the industrial sector, mainly through subsidized interest rates.

1. World Bank Memorandum, July 1988.

The principal beneficiary of the funds produced by petroleum was the public sector. It is estimated that, between 1973 and 1982, funds from petroleum exports accounted for an average of 10.8 percent of the GNP annually, and resources that were partially transferred to the private sector through subsidies for the internal consumption of petroleum derivatives totaled 4.1 percent of the GNP.² In addition, it was estimated that 1 to 2 percent of the GNP was subsidized annually by supporting the price of milk, wheat, public services, and credit. Virtually the whole value of these subsidies, and the largest part of the public spending generating from petroleum revenues, accrued to urban residents, especially of the largest and most politically influential cities, Quito and Guayaquil.

At the same time, employment in public administration grew in a disproportionate manner, at a rate of 14 percent annually from 1973 to 1975, more than 5 percent annually from 1976 to 1981, and approximately 2.5 percent annually since then. At present, there are more than 400,000 public employees, which represents 50 percent of the formal workers in the economy.

The petroleum boom also made it possible to maintain non-petroleum taxes, such as income taxes and tariffs, at low levels. Income taxes and tariffs currently contribute 2.5 percent of the GNP yearly, while these tax revenues in other countries at a similar level of development contribute more than 10 percent of the GNP. Finally, based on the expected continuation of elevated foreign earnings from petroleum exports, the external debt increased remarkably, from US\$ 260 million in 1972 to US\$ 6.7 billion in 1983 and to about \$11 billion at the end of 1988.

This combination of factors, plus subsidies to certain activities with a strong urban concentration and structural and natural causes, clearly provided a major stimulus to accelerated urbanization in Ecuador.

The concentration of economic development in a few areas of the country also was fostered by the concentrated growth of public sector expenditures. In 1986, for example, of the establishments with more than 10 employees, 79.4 percent of the aggregated value of industry, 74.1 percent of employment, and 77.2 percent of investment was concentrated in the provinces of Pichincha and Guayas where the primate cities of Quito and Guayaquil are located.

Economic Developments, 1983 to 1988

After 1983, the situation and perspectives of the Ecuadorean economy changed radically. The price of petroleum fell from US\$ 25 per barrel to approximately US\$ 15 per barrel, with little hope for a recovery to historical

2. Ibid.

levels in the next few years. This situation led to serious internal imbalances, an overwhelming public deficit, an elevated inflation rate, and difficulties in paying the external debt.

Public expenditures reached 31.2 percent of GNP in 1987, with less than one-fourth of this sum corresponding to capital expenditures, while income reached only 21.7 percent, creating a deficit equal to 9.6 percent of GNP. In 1988, public revenues stayed nearly constant at 21.2 percent, while expenditures fell sharply to 26.3 percent of GNP, reducing the deficit to about 5.1 percent of GNP. Reducing the public sector deficit further will require reducing the subsidies on gasoline and public services (which benefit urban areas especially) and increasing fiscal revenues from non-petroleum income, especially through income tax and the taxing of commercial transactions. The comprehensive tax reforms initiated in 1989 are an important step toward reducing tax evasion and increasing collections from domestic sources, while greatly simplifying the existing tax code.

External debt service represents a heavy load for Ecuador. Greater efforts are required in two directions: first, in finding mechanisms to reduce the debt and second, in rationalizing the use of currency through exchange policies that maintain the incentive for exports and the efficient selection of imports.

The gradual elimination of subsidized interest rates helped to increase financial savings from 5.5 percent of the GNP in 1980 to 13.9 percent in 1987. This factor has been fundamental to maintaining the equilibrium of the principal macroeconomic aggregates.

The economic crisis in Ecuador during the past few years has caused a deterioration of conditions in the labor market. Open unemployment has increased from 5 to 9 percent in the major cities, while underemployment reached levels close to 40 percent. The decrease in real incomes is one of the basic problems to be resolved in the future. In the formal sector, employment generation can be stimulated directly by means of market mechanisms or through a combination of more sustained growth and a stable economy. In the informal sector, these demand-side mechanisms do not function with the same dynamism, resulting in the need for direct programs to provide credit, technical assistance, and training.

Prospects for the 1990s

Although the next decade will not be without significant risks for the Ecuadorean economy, the most likely scenario to unfold during the early part of the decade is that of gradual recovery within a climate of only gradually easing constraints on resources.

On the external front, petroleum, bananas, shrimp, coffee, and cocoa will continue to dominate merchandise exports, and there is no indication at present of dramatic variations in either export prices or the availability of export supplies. It is likely that the government will make the necessary investments and maintain the policies required to avert a decline in petroleum production. It might even be able to increase production slightly so as to accommodate a gradual increase in domestic consumption and to increase export volumes at a modest rate of about 2.5 percent per year.³ It is unlikely, however, that any major increase in petroleum production and exports can be achieved without a significant increase in the availability of foreign financing for investments in exploration and development, public and private, and there is no basis for predicting such an increase at present.

Shrimp production and exports, booming areas during the 1980s, appear to be tapering off as a result of a combination of technological problems in maintaining recent production levels, some weakening in international prices, and an exchange-rate policy that has been unfavorable to exporters during the last year. Technological constraints appear to be sufficient to impede a resumption of the extremely high growth rates in shrimp production that were achieved during the last few years, regardless of the course of government policy on incentives.

Gold and other mineral exports will one day be major contributors to Ecuadorean foreign exchange earnings, but the investments required to develop these exports are large, and they are unlikely to be made until further improvements in the investment climate and in the external financial position of the Ecuadorean economy are achieved. Both the improvements and the required investments will take time to implement, and none is likely to bear fruit until the latter part of the new decade.

The growth of other nontraditional exports, including manufactured exports, will be highly dependent on the course of domestic government policy, especially policies on exchange rates, credit, and pricing. Part of the experience of the 1980s has been to demonstrate that nontraditional export sectors can be extremely responsive to policies that provide stable incentives to exporters, and it is hoped that the lessons of this experience will not be lost. The relatively low starting volumes of such nontraditional exports mean, however, that even if domestic policies are successful in maintaining high growth rates for the sale of these items, it will still be several years before a significant percentage of total export earnings can be expected from these sources. Projections by the Government of Ecuador (GOE) indicate a 12-percent growth rate for nontraditional exports through 1994, but even at such a rate they will have reached only about 7.5 percent of total exports by that year.⁴

3. Economic Memorandum of the Republic of Ecuador, 1989.

4. Ibid.

On the domestic front, the major challenges will be the creation of sufficient employment to avert a further deterioration in living standards, while avoiding a resurgence or acceleration of domestic inflation. Clearly, the only realistic means of achieving the economy's job-creation requirements is through encouragement of private sector investment and activity among firms of all sizes. It is not clear, however, whether the government will be able to maintain a sufficiently credible and consistent policy to bring forth the required effort and commitment from the private sector. A likely scenario is one in which further deterioration in the employment situation is averted while inflation is contained at high but relatively stable levels. Unemployment and underemployment are likely to remain high, while real wages for formal sector workers are likely to continue to be stagnant. The medium-term political ramifications of such a scenario are difficult to predict, but they undoubtedly encompass certain dangers and risks.

The Role of Cities in Economic Development

In modern societies, urban dwellers have available a wide range of technologies that significantly reduce the costs of economic activities and that make possible the achievement of high levels of productivity. One has only to consider the infrastructure that is required to support large-scale manufacturing, transportation, marketing, and other services such as retailing, banking, education, and health — and to consider the cost of such infrastructure — to comprehend the degree to which their unit costs per user are reduced through the concentration of population in urban agglomerations. The degree to which productivity is enhanced through the availability of urban infrastructure is apparent from even a casual examination of income differentials between urban and rural areas throughout the world, differentials that are especially acute in developing countries. It is also broadly true, in Ecuador as elsewhere, that there tends to be a close correlation between incomes per capita — productivity — and city size. The general explanation of this phenomenon is that, excluding possibly the very largest cities of the world, which may be approaching the point of diminishing returns to agglomeration, larger cities tend to be able to concentrate larger and more diverse amounts of capital per inhabitant than are smaller cities.

Equally important, the development and transference of technology is facilitated and made cost effective through the concentration of large numbers of people in cities. Cities create long-run economic opportunities for education, on-the-job training, and skills development that do not exist elsewhere, and the constant interaction between research and development activities and the application of technologies to a wide range of industrial and service sector uses provides continuous stimulus to both R & D and the application of technology that could not be replicated in any other setting.

While the correlation of income and city size is generally close, there are also obviously a large number of additional factors that influence the development of any particular city at a given time. Large cities can and do decline, while smaller cities grow rapidly in response to variations in comparative advantages. In Ecuador, the historical growth of Quito can be attributed to the presence of the national government, which, in recent times, has expanded enormously in financial importance as a consequence of the oil boom. As the primary port and the primate city of a rich agricultural region, Guayaquil has grown dramatically on the basis of domestic and international commerce and a range of other services such as finance. As the largest urban centers in the country, Quito and Guayaquil have also been able to attract a disproportionate share of large-scale industrial enterprises created during the last generation with the resources made available by oil and foreign borrowing. The secondary cities of Ecuador have until recently grown more slowly than Quito or Guayaquil, and they have remained more directly dependent on an agricultural economic base.

There are reasons to believe that the relative growth and economic importance of the secondary cities of Ecuador might already be increasing and that this shift in comparison with the metropolitan areas not only might continue but would be accentuated in the medium term. Beginning in the mid-1960s, the secondary cities of Ecuador, taken as a group, began to grow more quickly in percentage terms than either Quito or Guayaquil. This trend continues to be evident, and it is projected to continue at least into the mid-1990s.

A reason for believing that this change will be realized is related to the process of structural change that is being forced on the Ecuadorean economy by changing world market conditions and by the failure of an earlier development strategy based on rapid industrialization for a protected domestic market. The collapse in oil prices, which shows no sign of being reversed in the near future, will limit the further growth and financial capacity of the central government. This will probably have a moderating effect on the future growth of Quito. A shift away from large-scale, import-intensive manufacturing in favor of domestic resource-based manufacturing will probably further limit the growth of the capital city. A more export-oriented economy will shift production and related services to locations that are closer to their agricultural and mineral resource bases, and such an economy will probably support the growth of the main secondary cities of the country. In an export-oriented economy, Guayaquil will maintain a primary position on the basis of transportation, commerce, and services, but the development of competing ports such as Manta might eventually draw away a measure of growth from this now-dominant urban center.

Urbanization and Rural Development

In developing an urban strategy, USAID should, in keeping with its mandate to focus on the alleviation of poverty in developing countries, reflect its awareness of the impacts of urbanization on rural areas and rural economies. The growth of urban areas contributes to rural development in a variety of ways:

- Generating increased demand for food and fiber products produced in rural areas, thereby sustaining higher production and/or higher prices for farmers
- Providing employment opportunities for surplus rural labor, thereby permitting, at least in principle, sufficiently high ratios of capital (including land) to labor to be achieved so as to permit the maintenance or improvement of rural productivity and incomes
- Providing high-return investment opportunities for rural savers
- Providing manufactured products and equipment that improve the productivity and living standards of rural dwellers
- Generating and providing services and technology to rural inhabitants that enable them to enhance their productivity and living standards.

Urban and rural development should not be viewed as competing for resources, but rather as complementary processes in which urbanization permits the development of a productive agriculture and high incomes for a smaller rural population, while that same growth in agricultural productivity releases manpower and resources to sustain the growth of urban areas.

As succinctly stated by the Urban Institute, "because cities have a high concentration of national economic activity, as well as of the politically influential population, the policy treatment they receive has broad potential for generating gains or losses in economic efficiency. In the past, some of the urban concentration has been artificially stimulated by price subsidies for urban consumer goods, by above-market wages paid to government employees, and by sheltering from international competition of the domestic industries located in cities." The report states that "these inefficiencies, which clearly have been biased against and have retarded the development of rural areas in developing countries, are only now beginning to be undone

through policy reforms."⁵ Ecuador has been no exception to this rule. The development philosophies of the fifties, sixties and seventies — abetted by a period of artificial petroleum prosperity — generated a series of distortions and subsidies, already alluded to, that together constitute a strong urban bias in the way governmental activity has influenced the development of the economy. Radically different financial circumstances in the eighties and the current decade are already having an impact on government policy, however, in ways that will reduce the role of government in direct employment and spending, reduce the level of price subsidies accorded urban dwellers, and otherwise reverse the biases that remain from an earlier period.

The "new" urban interest, says the Urban Institute, is not to snare the highest share of government benefits, but to build an economic base that can strengthen long-run national growth. Elements of such a reorientation of urban thinking and policies are already evident in Ecuador, though much remains to be done. In view of the fact that a growing percentage of the poor in Ecuador, as elsewhere, are to be found in urban areas — and that this trend can only be reinforced as the vast majority of the population becomes urbanized during the remainder of the century — an important role for A.I.D. becomes that of assisting in the development and execution of a balanced and sustainable urban strategy for Ecuador. Such a strategy might or might not include investments in urban infrastructure and other features of traditional urban development programs. With a primary focus on the alleviation of urban poverty, the strategy might encompass a wide range of project and program interventions.

Summary of Development Challenges for Ecuador in the 1990s

In our view, there are seven main areas in which the current and succeeding Ecuadorean governments will be challenged, during the 1990s, in their efforts to restore growth and development to an economy that has been frustrated for much of the last 10 years. Addressing these challenges constructively will call forth a basic set of policy responses that are essentially invariant — except perhaps in emphasis and degree — across the range of political ideologies that are likely to influence governmental thinking in Ecuador over the course of the next few years. The challenges — and the broad nature of the policy responses required to meet them — are identified below, to provide a framework for the consideration of the current urban economy and what needs to be done to begin the process of developing an effective urban strategy.

5. Peterson, Kingsley, and Telgarsky, The Urban Institute, "Urban Economic Development: Orientation to Policy," draft prepared for the Office of Housing and Urban Programs, USAID, August 1988.

1. Generating Employment

Projections published by CONADE indicate that total population will grow at the comparatively high rate of 2.7 percent per annum in Ecuador between 1990 and 1995.⁶ Continued rural-to-urban migration and the growth and reclassification of small towns will result in the urban population growing at 3.9 percent per annum during this period. Most striking of all, the *urban economically active population* is projected to grow at 4.4 percent per annum, due to a changing age structure of the population, selective migration, and increasing rates of participation in the labor force. The rural economically active population will only grow at 1.4 percent per annum between 1990 and 1995. Trends established in the first half of the decade are projected to continue through the turn of the century, making it clear that the creation of urban jobs is a priority task facing the country. During the decade just begun, the urban sector will have to provide three out of every four new jobs needed to employ new entrants into the work force.⁷

Open unemployment in urban areas has grown to about 10 percent in the last couple of years in Ecuador as a result of prolonged recession and the damage caused by the 1987 earthquake. "Underemployment," primarily a question of low-productivity/low-wage employment and largely an urban phenomenon in Ecuador, has also risen alarmingly in recent years, to levels estimated as high as 40 percent of the economically active population. Urban poverty is clearly associated with both open unemployment and so-called invisible underemployment. Both of these are a consequence of sluggish demand for labor in Ecuador, reflecting the domestic economy's inability to grow quickly enough or in the right ways to generate the required number of productive jobs.

Future employment policies will have to emphasize the stimulation of more rapid growth in labor demand, primarily on the basis of improving the economy's international competitiveness so as to provide better employment opportunities in export and import-competing sectors. Basic education and skills training will also have to be emphasized to raise labor productivity and labor mobility, thus reducing the extent of structural unemployment and underemployment that exist in the economy.

Confronting the employment challenge will require concerted policies and programs at both the macroeconomic and microeconomic levels. These will have to be compatible with other actions required to fulfill other related development objectives, such as are discussed below. The broad outline of an urban development strategy, encompassing specific actions to address the

6. Reported in "Formulating a Strategy for Employment Generation in Ecuador: Issues and Priorities," Development Alternatives Inc., November 1988.

7. Ibid.

main problems identified here, is presented in Chapter V, "Strategic Framework for USAID/Ecuador."

2. Developing Human Resources

An effective development strategy must not only stimulate the growth that can provide productive employment, but it must also prepare new entrants to the labor force to be productive. Socialization, education, training, motivation, and health maintenance are but a few of the ways in which the productivity of a country's human resources is enhanced. In large population centers, public organizations increasingly assume roles and responsibilities for developing human resources that in more simple settings were the domain of the family and traditional community groups. In the modern urban setting, human resource development becomes much more explicitly a conscious and deliberate public sector investment activity, absorbing significant levels of resources and requiring the development and application of specialized systems and skills. As in other areas of public sector activity, financing the necessary investments and maximizing the efficiency of expenditures become overriding considerations.

3. Improving Fiscal Performance

The destabilizing consequences of erratic fiscal performance have become all too apparent in Ecuador during the 1980s. One of the key challenges for the current and succeeding governments during the 1990s will be the further consolidation of efforts to slow the growth of government expenditures while broadening and diversifying the revenue base to provide government with a more stable and predictable income. On the expenditure side, a key means of restraining growth without sacrificing the quantity or quality of services provided by government is through improving the efficiency of public sector spending. This can be done by introducing new technologies into the realm of public administration, often implying delegation of decision-making authority and implementation responsibility to the level of municipal and other local government units. More diversified and stable revenue collections also imply decentralization and an increased role for local government units. User fees will undoubtedly make up an increasing share of public sector revenues in the future, in Ecuador as elsewhere, meaning once again an increased role in revenue collections for local service providers.

With a tradition of extreme dependence on a single revenue source at the national level, and extreme dependency and underdevelopment of local government units in relation to the national government, meeting the fiscal performance challenge successfully in Ecuador will mean massive institutional adjustments at all levels.

4. Maintaining Price and Exchange-Rate Stability

Closely linked to the issues of fiscal management discussed above, is the need to restore and maintain price and exchange-rate stability to the Ecuadorean economy. Ecuador has been subjected during the 1980s to inflation and exchange-rate instability that is unmatched in its history, though not nearly as severe as elsewhere in Latin America. As is well known, inflation is capable of inducing major changes in the distribution of income — generally to the detriment of low- and middle-income wage earners. It also represents an element of uncertainty that reduces the efficiency and income-generating potential of the economy. Similarly, while exchange rates need to change in response to alterations in the relative international competitive position of the economy, extreme exchange-rate instability, such as has been prevalent in Ecuador during the 1980s, is a destabilizing element that reduces the efficiency and output of the domestic economy. Regaining and maintaining price and exchange-rate stability will need to be major objectives of the GOE during the 1990s. This will, of course, have important implications for urban economic development.

5. Promoting the Growth and Diversification of Exports

Despite depressed international prices compared with previous highs, petroleum exports continue to account for over 45 percent of the value of total merchandise exports from Ecuador. Petroleum and two other goods, shrimp and bananas, accounted for about 75 percent of exports in 1989. Two more agricultural products, coffee and cocoa, contributed an additional 15 percent, for a total of 90 percent of exports (and almost 20 percent of GDP) directly dependent on five basic commodities. Much of the instability of the Ecuadorean economy throughout its history has been the immediate result of excessive dependence on a small number of export commodities whose prices fluctuate widely in international commerce.

While Ecuador must not neglect the further development of its traditional commodity exports, it must also emphasize diversification of the productive base of the economy through the development of new export products. Significant untapped export potential exists in a wide range of sectors, including minerals, agricultural and agro-industrial products, and light manufactures. A deliberate and sustained policy of export promotion will have to be developed and maintained throughout the 1990s, however, if the country is to achieve a noticeably different structure of exports by the turn of the century. The implementation or non-implementation of an effective export development strategy will probably be the single most important determinant of the economy's medium-term ability to create the number of productive jobs needed to stop the increase in urban poverty in Ecuador. It will consequently also be a major determinant of qualitative and quantitative spatial developments over the next couple of decades.

6. Financing Capital Investment

The reactivation and articulation of the private sector economy of Ecuador during the 1990s will require major increases in both private and public investment. Private investment has fallen sharply since the 1970s as a percent of GDP, and, although such investment is not expected to regain its former share for at least several years, improvements in investor confidence and in the business climate should result in the repatriation of some flight capital and the recuperation of private sector investment in the range of 15 to 20 percent of GDP. Government policy must aim at restoring business conditions and the business climate to the extent necessary to ensure this outcome. In addition, a wide range of investments must be undertaken and financed by the public sector directly. Domestic resource mobilization (public sector revenues and credit mobilized internally by the financial system) and the availability of foreign credits and investment capital will be the primary determinants of the levels of investment that can be achieved during the next decade. In addition to restoring investor confidence, therefore, any future government seriously interested in implementing an accelerated investment program must also maintain policies that will encourage resources — foreign and domestic — to flow towards its financing.

7. Improving the Quality of Life

Clearly, all future Ecuadorean governments must be concerned with improving the quality of life for Ecuadorean citizens, especially the rural and urban poor and those who do not yet have access to basic education and health services. Maintaining a high quality of life for future generations will also require increasing attention to the preservation of the country's environmental resources, which are increasingly recognized as fundamental to the preservation of economic as well as aesthetic values.

II. CHARACTERIZATION OF URBANIZATION AND POVERTY IN ECUADOR

Trends in Population Growth and Distribution

Ecuador's population more than doubled from 1950, when it was 3.2 million, to 1982, when it was nearly 8.1 million. During this same period, urban population increased more than 400 percent, from just over 0.9 million in 1950 to nearly 4.0 million in 1982. The urban share of the total population increased from 28.5 to 49.2 percent during this period.⁸ The increase in the urban population of 3.1 million persons was distributed nearly equally between the metropolitan areas of Quito and Guayaquil, which rose by 1.6 million, and the other urban areas of the country, which rose by 1.5 million. In the metropolitan areas, the majority of the population growth occurred in Guayaquil, which saw an increase of more than 0.9 million. This is in contrast to Quito's growth, which was less than 0.7 million. (See Table 2.1).

Projections of Ecuador's population for the period between 1982 and 1995 were prepared by the Instituto Nacional de Estadística y Censos (INEC) in late 1986. These projections were based on 1982 census data that had been adjusted for the historical tendency of underreporting of population in the census. While the more detailed estimates in these projections, such as the disaggregation by age, sex, education, and migration, are considered of limited reliability, the data concerning the rural-urban population distribution are regarded as quite accurate.

INEC projections indicate that Ecuador's total population is projected to grow to nearly 10.8 million persons by 1990 and to increase to more than 12.3 million by 1995 (see Table 2.2). These population increases relate to an

8. These census statistics probably understate Ecuador's urban population because peripheral urban areas are included in the rural statistics. If these peripheral urban areas were included in the urban population, urban areas would account for 61 percent of Ecuador's total population.

Table 2.1. Ecuador: Population Trends by Urban and Rural Areas, 1950, 1962, 1974, and 1982

Area	Population (thousands)				Distribution (Percentage)			
	1950	1962	1974	1982	1950	1962	1974	1982
Ecuador	3,202.8	4,476.0	6,521.7	8,060.7	100.0	100.0	100.0	100.0
Urban areas	913.9	1,612.3	2,698.7	3,968.4	28.5	36.0	41.4	49.2
Quito	209.9	354.7	599.8	866.5	6.6	7.9	9.2	10.8
Guayaquil	259.0	510.8	823.2	1,199.3	8.1	11.4	12.6	14.9
Others	445.0	746.8	1,275.7	1,902.6	13.8	16.7	19.6	23.5
Rural areas	2,288.8	2,863.7	3,823.0	4,092.4	71.5	64.0	58.6	50.8

Source: Appendix A, Table 1.

Table 2.2. Ecuador: Population for Urban and Rural Areas, Adjusted 1982 and Projected 1990 and 1995

Area	Population (Thousands)			Distribution (Percentage)		
	Adjusted 1982	Projected 1990	Projected 1995	1982	1990	1995
Ecuador	8,606.1	10,781.6	12,314.2	100.0	100.0	100.0
Urban areas	4,225.7	5,976.8	7,237.2	49.1	55.4	58.8
Quito	918.7	1,281.8	1,549.4	10.7	11.9	12.6
Guayaquil	1,272.0	1,764.2	2,125.4	14.8	16.4	17.3
Others	2,035.0	2,930.8	3,562.4	23.6	37.1	28.9
Rural areas	4,380.5	4,804.8	5,077.0	50.9	44.6	41.2

Source: Appendix A, Table 1.

annual average growth rate of 2.86 percent between 1982 and 1990 and 2.69 percent between 1990 and 1995. Both of these growth rates are slightly higher than the 2.53 percent growth experienced between 1974 and 1982. This is due to the assumption that, from 1982 to 1990, the death rate would decline slightly faster than the birth rate. After 1990, it is expected that the birth rate will decline more rapidly than the death rate, resulting in a somewhat lower rate of population growth.

Population in urban areas is expected to reach nearly 6.0 million by 1990 and to surpass 7.2 million by 1995, representing 55.4 and 58.8 percent of the total population, respectively. During the period from 1982 to 1995, the urban population is projected to increase by 3.0 million, with approximately half of the growth expected in the metropolitan areas of Quito and Guayaquil (1.5 million) and half in the other urban areas (1.5 million). Again, however, Guayaquil is expected to account for the majority of the metropolitan population growth (0.9 million).

Regional Aspects and Differences in Urbanization Patterns

Significant changes in the regional distribution of Ecuador's urban population have taken place since the 1950 census. In general, the share of Ecuador's urban population in the Sierra region has declined, with the Coast region increasing its share accordingly. For instance, in 1950, 53.1 percent of the urban population lived in the Sierra region and 46.3 percent lived in the Coast region. By 1982, the Sierra region's share had decreased to 43.0 percent, while the Coast region had become the most populous urban region, with 55.4 percent of Ecuador's total urban population.

The most notable shift has been in the growth of "other urban" areas in the Coast region. The population of these areas has increased from 163,900 in 1950 to 1.0 million in 1982, and it is projected to reach nearly 2.0 million by 1995. The Coast's other urban areas, which accounted for only 17.9 percent in 1950, were estimated at 25.2 percent for the 1982 census, and they are projected to account for 27.0 percent of Ecuador's urban population by 1995 (see Table 2.3).

Urban development in Ecuador at the moment is characterized by the apparently greater dynamism of the secondary cities over the traditionally larger cities like Quito and Guayaquil. This phenomenon occurs principally in certain cities of the Coast where, it is hypothesized, dynamic economic growth has been experienced as a result of an economy directed at agro-exports. Quito and Guayaquil, on the other hand, with a less dynamic growth, have maintained stable growth rates of about 5.6 percent annually (see Table 2.4).

Table 2.3. Ecuador: Urban Population by Region, Actual 1950, 1962, 1974, and 1982 and Projected 1990 and 1995

Area	Census			Projected		
	1950	1962	1974	1982	1990	1995
	Urban Population (Thousands)					
Ecuador	913.9	1,612.3	2,698.7	3,968.4	5,976.8	7,237.2
Sierra	485.5	744.4	1,202.8	1,707.0	2,512.7	3,007.6
Quito	209.9	354.7	599.8	866.5	1,281.8	1,549.4
Other Urban	275.6	389.7	603.0	840.5	1,230.9	1,458.2
Costa	422.9	857.5	1,470.6	2,199.3	3,354.2	4,084.5
Guayaquil	259.0	510.8	623.2	1,199.3	1,764.2	2,125.4
Other urban	163.9	346.7	847.4	1,000.0	1,590.0	1,959.1
Oriente	5.6	10.4	23.0	57.6	101.8	134.3
Galapagos	0.0	0.0	2.4	4.5	8.1	11.0
	Regional Distribution (Percent)					
Ecuador	100.0	100.0	100.0	100.0	100.0	100.0
Sierra	53.1	46.2	44.6	43.0	42.0	41.6
Quito	23.0	22.0	22.2	21.8	21.5	21.4
Other urban	30.1	24.2	22.4	21.2	20.6	20.2
Costa	46.3	53.2	54.5	55.4	56.1	56.4
Guayaquil	28.4	31.7	23.1	30.2	29.5	29.4
Other urban	17.9	21.5	31.4	25.2	26.6	27.0
Oriente	0.6	0.6	0.8	1.5	1.7	1.8
Galapagos	0.0	0.0	0.1	0.1	0.1	0.2

Source: Ministry of Economy, I Censo de Población del Ecuador, 1950, Quito 1960; INEC, II Censo de Población, 1962; INEC, III Censo de Población, 1974; INEC, IV Censo de Población, 1982, and INEC, Proyecciones de la Población Ecuatoriana (1982-1995), Quito: CONADE, 1985.

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Table 2.4. Urban Development in 17 Cities of Ecuador

City	Census Data				Annual Rate of Growth	Projection	
	1950	1962	1974	1982	1974-82	1990	1995
Santo Domingo	NA	NA	30,523	69,235	15.9	116,500	152,700
Portoviejo	16,330	32,228	59,550	102,628	9.0	163,900	207,600
Manta	19,028	33,622	64,519	100,338	6.9	158,700	190,900
Quevedo	4,168	20,602	43,101	67,023	6.9	108,700	136,200
Machala	7,549	29,036	69,170	105,521	6.6	166,300	208,600
Loja	15,399	26,785	47,697	71,652	6.3	107,300	130,500
Esmeraldas	13,169	33,403	60,364	90,360	6.2	136,400	166,800
Babahoyo	9,181	16,444	28,914	42,266	5.8	63,000	76,400
Cuenca	39,983	60,402	104,470	152,406	5.7	227,200	276,000
Guayaquil	258,966	510,804	823,219	1,199,344	5.7	1,764,200	2,125,400
Milagro	13,736	28,148	53,106	77,010	5.6	131,300	162,500
Quito	209,932	354,746	599,828	866,472	5.6	1,281,800	1,549,400
Chone	8,046	12,834	23,627	33,839	5.4	53,500	64,400
Riobamba	29,830	41,625	58,087	75,455	3.7	101,000	114,000
Ibarra	14,031	25,835	41,335	53,428	3.7	74,200	86,000
Ambato	31,312	53,372	77,955	100,454	3.6	137,400	157,800
Tulcan	10,623	16,448	24,398	30,985	3.4	42,000	47,700

Note: NA = Not available

Source: Andres Jarrin, Jaime Serrano, *Evaluacion de Necesidades de Vivienda en el Ecuador, 1988-2008*, Marzo/1989; Morris D. Whitaker and Jaime Alzamora, *Characteristics and Indicators of Ecuador's Population*, August 1988, A.I.D.

In large part, the growth of the other urban areas in the Coast region can be credited to the emergence of several significant urban centers during the period from 1950 to 1982. In the Coast region, cities such as Machala, Portoviejo, Manta, Esmeraldas, Milagro, and Quevedo have become established cities in what had been virtually rural areas. While the cities in the Sierra region have also grown during this period, they were already established as urban areas by 1950, with the possible exception of Santo Domingo.

Projections of the 1990 and 1995 population for these 17 cities reveal that the five most populous cities — Guayaquil, Quito, Cuenca, Machala, and Portoviejo — will remain the same through 1995 (see Table 2.4). Faster growth in the Coast cities will result in Manta, Esmeraldas, and Milagro moving ahead of Ambato by 1995. Three cities had populations greater than 100,000 by 1974, seven cities had populations greater than 100,000 by 1982, and there are projected to be 13 cities with populations in excess of 100,000 by 1995.

The sections that follow discuss several aspects of the economic and social conditions under which Ecuador's increasingly urban population lives.

Incidence of Urban Poverty and Indicators of Basic Needs

The urban poor in Ecuador are those who, because of insufficient income, are compelled to locate themselves in the marginal zones of the city where low standards prevail in the quality of life. In a broader sense, one can speak of a group of people whose possibilities of social and material progress are limited by insufficient nutrition, poor health, high infant mortality, and low levels of education. This "marginal" group is composed mostly of the unemployed/underemployed (informal) urban sectors, as well as some in the employed (formal) sector. Human deprivation in the urban areas of Ecuador can be described, and presumably can also be addressed and alleviated, both in terms of the income-based concept of "poverty" and in terms of the broader but sometimes more visible and more easily measurable characteristic here referred to as "marginality". In what follows, the available information on both urban poverty and urban marginality in Ecuador is summarized.

In Ecuador, the major part of the informal sector groups is composed of first- or second-generation peasants who have been transformed into urban inhabitants by an escalated migration to the big cities, which offer better possibilities for employment, income, education, and health.

The following paragraphs discuss the number of urban population groups at poverty levels and where they are to be found.

Poverty Indicators

According to Lidia Barreiros and Rob Vos, methods for defining the level of poverty fall into two categories: (1) absolute poverty, which is a function of the factor of economic income (monetary - material), and (2) relative poverty, which is a function of the level of satisfied basic needs (quality of life) expressed in terms of access to and availability of education, health, infrastructure, and transportation.⁹

Absolute poverty. This is defined as the number of persons or families who, because of insufficient income, are placed below the minimum subsistence level. This minimum subsistence level indicator could be expressed in relation to a minimum basket of goods and services quantified monetarily. Thus, the population in absolute poverty would include all those individuals or families whose monetary income does not allow them to acquire a minimum basket of goods and services.

According to various studies completed in the last two years and Ecuador's Central Bank estimated in 1989 adjusted to include housing, the minimum basket would cost 52,000 sucres per month.¹⁰ That is to say, for purposes of characterizing poverty, that all five-member families that do not earn an income of 52,000 sucres per month will be considered to fall into the category of absolute poverty.

Based on INEM surveys, a comparative analysis between the income distribution per quintile points out that 40 percent of the urban population do not have the means of acquiring a minimum basket of goods and services (see Table 2.5). The poor are those inhabitants who fall into the first two quintiles. From this the following implications can be drawn:

- In absolute numbers, the largest urban population that lives in conditions of absolute poverty in Ecuador (51 percent) is concentrated in Quito and Guayaquil; it is equivalent to some 1,128,640 inhabitants, or approximately 240,130 families of five members.

9. Barreiros, L., Vos, Rob E., y otros, *Ecuador, Teoría y Diseño de Políticas para la Satisfacción de las Necesidades Básicas*.

10. Departamento de Indicadores Económicos, Banco Central del Ecuador, 1988-89, y Edgar de la Bastida y Rob Vos, *El Salario y los Niveles de Vida Urbanos en el Ecuador*, Instituto de Investigaciones Económicas de la Universidad Central del Ecuador, septiembre de 1987. This minimum basket includes the following for a family of five: minimum cost for food (23,244 sucres), housing (19,240 sucres), clothing (3,952 sucres), and education (5,564 sucres).

Table 25. Distribution of Urban Income by
Five Population Ranks

Income ranks (Quintiles) ^a	1987		1988	
	Quito and Guayaquil ^b		Other Cities ^c	
	Percentage of total revenue	Monthly income (sucres)	Percentage of total revenue	Monthly income (sucres)
1	4.7	19,576	1.96	9,875
2	9.6	39,984	5.50	27,912
3	13.4	55,812	17.80	89,662
4	20.8	86,632	25.00	126,187
5	51.5	214,500	49.60	249,920

a. Calculations done by A. Jarrin, *Assessment of Urban Poverty in Ecuador* (Draft), Annex Table A.3.

b. Income distribution for Quito and Guayaquil obtained from the 1987 survey, which only included Quito, Guayaquil, and Cuenca.

c. Income distribution for the rest of the cities is obtained from the 1988 survey, done for 65 cities including Quito and Guayaquil.

Source: Encuesta de Hogares (Survey of Households) INEM, November 1987 and November 1988.

- The other 49 percent of urban poor are located in the rest of the cities, amounting to 1,087,120 inhabitants representing approximately 231,300 families.
- The spread of income distribution in the small and large cities results in a rather uneven disaggregation. Compared to Quito and Guayaquil, the poorer quintiles of the rest of the urban areas capture a smaller percentage of total revenue, suggesting that the urban poor might be even poorer in other cities. However, the middle income quintiles in the rest of the cities receive higher levels of income than those of Quito and Guayaquil.

Because information concerning income distribution per city is not available, we proceed to analyze poverty levels in relative terms, using as the best proxy available an index of satisfaction of basic needs, which ranks quality of life by city and region.

Relative poverty. This is determined in relation to the average standards of living or quality of life prevailing among the population and not precisely on the basis of a ceiling or minimum level of income. In this sense, relative poverty encompasses all those persons or families whose quality of life falls below the average level of the quality of life of the total population. While this is not the best indicator to study the degree of urban poverty in Ecuador, it does provide useful information on the geographic incidence of poverty.

The condition of relative poverty in Ecuador can be estimated based on the indices of the quality of life attained by city. The quality of life index or a "factor of satisfaction of basic needs" (FSBN)¹¹ is determined as the weighted summation of the levels of coverage of five basic needs:

11. $FSBN = (A \cdot XA) + (B \cdot XB) + (C \cdot XC) + (D \cdot XD) + (E \cdot XE)$
 where: A = percent of coverage of drinking water; XA = .30
 B = percent of coverage of sewage system; XB = .20
 C = adequate infant nutrition share; XC = .20
 D = level of education; XD = .15
 E = percent of livable housing; XE = .15

A sensitivity analysis of the ranking of FSBN per city obtained by applying different weights is presented in Table A4 in the Annex. It shows that the relative ranking of cities is not affected, particularly in terms of the size of the city.

(1) coverage of drinking water, (2) coverage of sewage system, (3) share of infants with adequate nutrition, (4) level of education, and (5) housing (percentage of livable housing). (See Table A1 in the Annex.)

The cities have been classified according to their population sizes in seven categories (see Table 2.6). Those cities showing a ranking below 4 for their quality of life index would be considered the poorest cities of the country. The results observed are the following:

- The highest rankings for quality of life indices (rank=1 and 2) are shown in San Cristobal, Ruminahui, Guayaquil, Quito, and 10 other cities; 8 are located in the Coast and 7 in the Sierra. (See Table A1 in Annex). These cities have the highest level of satisfaction of basic needs compared to the other cities, thus urban population living in other cities would be considered poorer.
- Fourteen cities are classified as attaining the third highest ranking of quality of life (rank=3) of which 10 are in the Sierra and 9 are in the Coast.
- The largest group of cities attained the middle rank value (rank=4, average index of quality of life between 30 and 40). This is observed in 44 cities, of which 22 are in the Sierra and 22 are in the Coast.
- The remaining three groups of cities showed the lowest indices of quality of life. It can be inferred that cities with a population of 50,000 or fewer inhabitants show the most deficiency in the coverage of basic infrastructure.

As one would expect, the quality of life is generally better in the metropolitan sector than it is in other urban areas. On average, lower quality-of-life indices are found in secondary and tertiary cities; the lowest conditions of the quality of life are found in small cities (see Table A5 in the Annex).

Coverage of Basic Needs

It is of interest to study the specific unmet basic needs in each group of cities. To this end, Table 2.7 presents a comparison for prioritizing the deficiencies to be dealt with. The following observations can be made:

Table 2.6 Factor of Satisfaction of Basic Needs by City and Region 1/

Rank	FSBN Range	A		B		C		D		E		F		G		TOTAL		PAIS																	
		# a	% b	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%																
1	60-70													1	100.0	1	1.4	0	0.0	1	8.8														
2	50-59.9	1	14.2	1	14.2	3	42.8	1	14.2		3	42.8		1	14.2	1	14.2	7	10.1	7	11.0	14	10.9												
3	40-49.9			2	20.0	3	93.3	1	10.0	2	22.0		2	20.0	3	33.3	1	11.1	4	40.0	10	14.4	9	15.2	19	14.8									
4	30-39.9			1	4.5				4	18.1	1	4.55	6	27.2	5	22.1	5	22.7	7	31.8	6	27.2	9	40.9	22	31.8	22	37.2	44	34.3					
5	20-29.9								3	15.0			5	25.0	1	5.8	5	25.0	4	23.5	7	3.5	12	70.5	20	28.9	17	28.8	37	28.9					
6	10-19.9								1	12.5			2	25.0	1	33.1	1	12.5			4	50.0	2	66.6	8	11.5	3	5.1	11	8.6					
7	Below 10												1	100.0							1	100.0			1	1.4	1	1.7	2	1.6					
Total No. of Cities		1		1		6		4		1		2		10		2		15		13		13		12		23		25		69	100.0	59	100.0	128	100.0

Source: Table A1 in Annex.

1/ Cities classification refers to the following categories:

Metropolitan cities include: Category A= population greater than 1,000,000

Secondary cities include categories:

B=cities with population between 100,000 and 1,000,000

C= cities with population between 50,000 and 100,000

D=cities with population between 25,000 and 50,000

Tertiary cities include categories:

E=cities with population between 10,000 and 25,000

F=cities with population between 5,000 and 10,000

G=cities with population less than 5,000

a/ # corresponds to the number of cities

b/ % corresponds to population of the cities as percentage of population in the Coast or the Sierra

Table 2.7. Coverage of Basic Needs Compared by Category of City

City category	City's population	All basic needs combined		Drinking water		Sewage		Nutrition		Education		Housing	
		FSBN ^a	Rank ^b	Percent	Rank ^c	Percent	Rank ^c	Percent	Rank ^c	Percent	Rank ^c	Percent	Rank ^c
A	Above 1,000,000	56.9	7	72.3	5	59.6	3	48.5	2	24.0	1	66.9	4
B	100,000 to 1,000,000	48.2	6	60.9	4	36.2	2	54.1	3	12.9	1	66.7	5
C	50,000 to 100,000	45.6	5	63.7	3	36.1	2	41.3	3	12.4	1	61.0	4
D	25,000 to 50,000	37.5	3	35.4	3	16.9	2	54.0	4	7.9	1	66.0	5
E	10,000 to 25,000	37.6	4	42.3	3	19.95	2	48.57	4	6.7	1	60.8	5
F	5,000 to 10,000	30.9	1	33.7	3	11.1	2	42.7	4	4.8	1	59.1	5
G	Less than 5,000	33.0	2	30.0	3	11.85	2	48.7	4	5.2	1	56.1	5
National Median		34.62											

a. FSBN corresponds to Factor of Satisfaction of Basic Needs, see Table A5 in the Annex.

b. Rank by city category, 1 = worst, 7 = best; read vertically.

c. Rank by basic need, 1 = worst, 5 = best; read horizontally.

Source: Asociación de Municipalidades del Ecuador (AME), 1989 and Instituto Nacional del Niño y la Familia, 1989.

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- Tertiary cities¹² (categories C, D, E, F, and G) are the poorest; they show the lowest indices of the quality of life. The low quality of life in these locations seems to have its roots in four unsatisfied basic needs: the low level of education, the lack of adequate sewage systems, insufficient drinking water, and of least priority, housing.
- Secondary cities¹³ (category B) with an average quality of life have unsatisfied basic needs similar to those previously mentioned. The difference here is that malnutrition becomes a more important problem than the availability of drinking water. Thus, the priorities for this group would be education, sewage systems, and nutrition.
- The metropolitan cities ranked in the group with a higher quality-of-life index. The minor differential in the quality-of-life index observed in Quito and Guayaquil is due to the malnutrition problem prevailing in Quito.¹⁴ Thus, the priorities of unsatisfied needs of the metropolitan cities (category A, comprising Quito and Guayaquil) are education, nutrition, and sewage systems.

Substantial differences exist in the infrastructure coverage of secondary cities and other urban areas of the Sierra, the Coast, and the Oriente

12. Tertiary cities have an average population of 11,581 inhabitants; 124 cities fall under this category, of which 49 are in the Coast region, 51 are in the Sierra, 21 are in the Oriente, and 3 are on islands.

13. Secondary cities have an average population of 138,269 inhabitants; there are 6 in the Coastal region, and 4 in the Sierra.

14. As stated by a recent study on infant malnutrition conducted by CONADE and the Ministry of Health (Wilma Freire, *Diagnóstico de la Situación Alimentaria, Nutricional y de la Salud de la Población Ecuatoriana Menor de 5 Años*, 1988, p. 226), the problem of malnutrition and infant mortality is substantially worse in the poor settlements of Quito in spite of the better infrastructure and the satisfaction of the other basic needs. However, if Quito and Guayaquil were to have those malnutrition levels pointed out by the CONADE study (Quito=34 percent and Guayaquil=25 percent), Quito would be by far the city with the highest quality-of-life index (FSBN=64.33 percent). RRNA calculated FSN based on the INNFA absolute numbers quantifying malnutrition, which seem high for Quito; INNFA thinks that the index for Guayaquil could be undervalued. (See Table A6 and A7 and the note on the index of malnutrition for Ecuador in the Annex.)

region.¹⁵ Generally, urban areas in the Sierra have the highest level of coverage; they have both drinking water and sewage systems (see Table 2.8). While the percentage covered is considered high, the data indicate that substantial improvement occurred between 1981 and 1986 in urban water and sewage coverage. The region's average increased from 71 percent to 92 percent for water and from 55 percent to 86 percent for sewage.

The level of coverage for both drinking water and sewage is lower in the Coast region. According to the same source, 74 percent of the urban population in Coast provinces had water service and only 48 percent had sewage service in 1986. These data indicate that substantial investment is required to raise the level of coverage to those observed in the Sierra. Urban areas of the Oriente, while still relatively small, have coverage similar to that of the Coast region.¹⁶

Table 2.9 gives a regional description of the quality of life levels by province. Here, three groups of provinces are compared in terms of their conditions of quality of life.

- Esmeraldas, Asuay, Napo, Cotopaxi, and Sucumbios constitute the provinces in the poorest category (rank=1, with an FSN less than 30).
- Category 2 (with an FSN less than 40 but higher than 30) includes 10 provinces, of which 6 are in the Sierra and 4 are on the Coast; Guayas is in this group.
- The provinces that, on average, have the highest quality of life (with an FSN above 40) are Galapagos, Pastaza, El Oro, Pichincha, Carchi, and Tungurahua.

15. Data compiled by the Consorcio de Consejos Provinciales del Ecuador (CONCOPE) indicate the trends in the proportion of the urban population provided with drinking water and sewage services in each province for the period between 1981 and 1986. It is believed that these data overstate the level of coverage, particularly in the provinces that contain metropolitan areas and larger secondary cities. This is because inhabitants of peripheral areas are classified as rural population. For many cities, the peripheral areas include many marginal and newly inhabited areas that have little or no drinking water and sewage systems.

16. Robert R. Nathan Associates, *Ecuador Urban Development Assessment*, March 1989.

Table 2.8. Drinking Water and Sewage Coverage in Urban Areas by Region
(Population in thousands)

Region and province	Drinking Water				Sewage			
	1981		1986		1981		1986	
	Population covered	Percent of total population						
Sierra	1,247.0	71.4	1,986.4	91.9	957.3	54.8	1,868.0	86.4
Carachi	38.9	78.0	53.6	93.2	31.4	63.0	52.6	91.4
Imbabura	55.5	64.0	112.0	98.3	38.1	44.0	101.2	88.8
Pichincha	699.9	70.0	1,089.0	88.1	549.9	55.0	1,075.0	86.9
Cotopaxi	26.4	60.0	50.1	97.1	22.5	51.0	42.1	81.6
Tungurahua	89.5	72.0	144.5	98.6	69.6	56.0	132.0	90.1
Bolivar	17.7	75.0	29.4	99.2	15.4	65.0	26.8	90.4
Chimborazo	78.2	80.0	110.5	98.0	66.5	68.0	105.3	93.4
Canar	19.8	68.0	43.1	87.1	17.5	50.0	36.0	72.8
Azuay	132.9	80.0	208.2	97.6	83.1	50.0	178.0	83.4
Loja	88.2	71.0	146.0	97.0	63.3	51.0	119.0	79.0
Costa	1,055.4	46.4	2,093.5	73.6	856.8	37.7	1,364.0	48.0
Emeraldas	57.2	47.0	118.2	77.7	36.5	30.0	64.6	42.5
Manabi	203.8	60.0	355.5	83.2	122.3	36.0	181.0	42.4
Los Rios	69.3	45.0	176.4	90.0	54.6	36.0	83.8	42.8
Guyas	604.3	42.0	1,233.9	68.7	546.8	38.0	873.9	48.7
El Oro	120.8	55.0	209.5	76.3	96.6	44.0	160.7	58.5
Oriente	22.2	38.0	58.7	72.9	10.4	17.7	41.8	52.0
Napo	8.0	39.6	12.6	41.3	5.1	24.7	7.7	25.3
Pastaza	1.6	15.0	12.4	89.6	0.7	7.0	10.7	77.3
Morona Santiago	5.4	32.0	20.0	91.2	2.4	14.0	13.0	59.3
Zamora Chinchipe	7.2	67.0	13.7	96.2	2.2	20.0	10.4	73.0
Galapagos	3.9	84.5	5.4	85.7	0.9	19.4	1.2	19.0
Total urban areas	2,328.5	57.0	4,144.0	81.3	1,825.4	44.7	3,275.0	64.3

Source: CONCOPE, Cobertura de Servicios de Infraestructura, 1981-86.

Table 2.9. Factor of Satisfaction of Basic Needs Ranked by Province

Region	Province	Urban Population 1989	Average FSN ¹ by province	Ranking
Insular	Galapagos	7,649	51.82	
Oriente	Pastaza	16,393	48.20	
Costa	El Oro	311,728	47.04	
Sierra	Pichincha	1,404,092	46.80	1
Sierra	Carchi	61,986	46.54	
Sierra	Tungurahua	160,492	40.20	
Sierra	Imbabura	122,222	39.16	
Costa	Los Rios	217,526	35.80	
Oriente	Z. Chinchipe	7,779	35.12	
Costa	Guayas	1,973,741	35.10	
Sierra	Chimborazo	115,253	34.31	2
Sierra	Loja	167,917	34.29	
Oriente	M. Santiago	25,651	31.97	
Sierra	Canar	38,511	31.72	
Costa	Manabi	425,639	31.58	
Sierra	Bolivar	28,404	31.25	
Costa	Esmeraldas	155,237	30.22	
Sierra	Azuay	240,745	30.15	
Oriente	Napo	11,189	27.71	3
Sierra	Cotopaxi	56,275	26.74	
Oriente	Sucumbios	15,204	25.07	

1. See Table A2 in Annex.

Source: AME Asociacion de Municipalidades del Ecuador, 1989
 INNFA, Instituto Nacional de Nino y la Familia, 1989.

III. GOE URBAN POLICIES AND PROGRAMS AND THE ROLE OF OTHER DONORS

Institutional Setting

Other than CONADE, the planning institution of Ecuador, there is no central institution responsible for the establishment and implementation of urban policies and priorities. In recognition of the need to address the growing requirements of the increasing urban population, GOE has proposed the establishment of a new national authority on the urban sector (Consejo Nacional de Desarrollo Urbano). A draft for the decree that would institute this Council has been prepared and awaits a decision from the President of the Republic. According to sources close to the President and according to GTZ (the German Cooperation Program), the President would agree to the creation of this institution. Nevertheless, no action has been taken in this regard.

Consequently, in order to understand GOE urban policies and priorities at this time, it is necessary to obtain or infer, on a piecemeal basis, information from various institutions and sources.

GOE and Urban Policies and Priorities

National Development Plan, 1989-92

The GOE Social and Economic National Development Plan for 1989-92 contains two major macroeconomic objectives that are particularly relevant for urban development: to enlarge the coverage and to improve the quality of basic services (water supply, sewage, health, education, and shelter) and to decrease housing deficits and achieve minimal acceptable housing standards to benefit low-income groups.

The Plan calls for a National Housing Program, which would be jointly implemented by the Ecuadorean Housing Bank (BEV), the National Housing Board (JNV), the Social Welfare Ministry, the Ecuadorean Social Security Institute (IESS), the National Council for Science and Technology (CONACYT), and mutual funds.

Municipal development is a policy of GOE that enjoys high priority. There is great concern about the dependence that municipalities have on transfers from the central government, as economic forecasts anticipate fiscal constraints at least for the next three years. Consequently, transfer cuts, which are likely, would strongly affect the already inadequate municipal services. The Minister of Finance has asked for a study, to be completed by mid-January 1990, which will state the policies of GOE regarding transfers to municipalities.

GOE Macroeconomic and Sectoral Policies That Affect Urbanization

Urbanization, as a process in which population and productive activities become concentrated in urban areas and change fundamentally in nature, is a consequence of the workings of almost all sectors of the economy. The concept is different from urban development, which is more limited than urbanization. Urban development is often viewed as that part of the urbanization process that takes place in cities, especially that part by which the necessary physical and institutional infrastructure of cities is developed. An urban strategy for a government or donor agency should primarily focus on developing a coherent response to the process of urbanization, though this, of course, may include the implementation of urban development projects.

It is well known that the donor community is committed to structural adjustment lending programs to developing countries. This effort is ordinarily implemented under conditions that imply serious policy reforms in the recipient countries. In turn, these reforms affect the different sectors of the economy. As a consequence, it can be expected that sectoral adjustments will have impacts on the different processes of the economy, including the process of urbanization.

GOE has adopted a development strategy called Adjustment with Economic Reactivation and rejected one called Adjustment with Economic Recession. Both strategies were simulated with the macroeconomic model CONADE-ILPES.

It is likely that some economic policies will have more direct impact on the process of urbanization than others. From the structural (and sectoral) adjustment experiences throughout the world, these policies can be grouped into the following three categories: (1) production incentive policies, which address price controls, consumer subsidies, exchange rates, import protection, export incentives, and regulations; (2) incentives to save and invest policies, which address interest rate policies, the financial system, and investment incentives; and (3) public fiscal and investment policies.¹⁷

17. The Urban Institute, 1988.

Following is an assessment of the way that the current policies of GOE, as stated in the economic development strategy contained in the Social and Economic National Development Plan for 1989-92, could affect urbanization. Although it is not yet possible to document the full potential of the impacts that these policies will have on urbanization in Ecuador, there is some evidence in countries where these policies have been implemented that suggests certain trends.

Production Incentive Policies

Adjustment Policy. A significant reduction of price controls and subsidies tends to eliminate the urban bias, which in the past has resulted in lower income and higher implicit taxes for the countryside.

The response of GOE is to enact pricing policies that combine controls with increases, differentiating the goods that are elastic to pressures of supply and demand from those that are inelastic.

Possible Impact. If price controls and the elimination of subsidies to consumer goods (which mainly benefit large cities) are enacted, it is likely that the current terms of trade, which favor the urban areas, will be reversed. If economic rationality prevails, the economic benefits that are offered by the cities would no longer exist. This fact by itself might not be sufficient to discourage migration from the countryside to the cities, but at least it might encourage more economic activity in the countryside than would otherwise occur.

Adjustment Policy. The removal of protectionism and controlled exchange rates, with direct effects on the performance of imports and exports, is likely to increase economic efficiency and even to support the decentralization of economic activity.

GOE has no definite response to this policy at present. There is, however, a measure that could indirectly support it. This measure consists of strengthening domestic demand to maintain the growth rates of productive activities by recuperating or maintaining the purchasing power of wages, with the aim of improving the standard of living.

Possible Impact. Assuming that economic instruments are correctly applied in a way that causes wages to grow in real terms and in line with real growth of productive activities, the response of GOE would still be insufficient if domestic demand is not accompanied by the removal of protectionism and the establishment of free exchange rates. Thus, unless a more liberal trade policy is implemented, it is unlikely that the GOE policy will encourage decentralization of economic activity. This, in turn, might leave current urbanization trends untouched.

Adjustment Policy. The elimination of unnecessary regulation and control over private enterprise would benefit small formal and informal firms, which could then develop in an environment that does not favor large firms. New small enterprises would be expected to arise in both rural and urban areas.

The response of GOE is through policies to provide incentives for public and private investment as instruments for economic reactivation and GDP growth.

Possible Impact. If investment is encouraged without reforming the regulations that favor large firms, it is likely that large firms will continue to lead economic activity, thus consolidating large agglomerations where they are located. As a consequence, small enterprises in smaller cities would not emerge. The current trend of increasing the concentration of population and economic activity in the larger urban areas would continue, a result that is the opposite of what is intended by the adjustment policy.

Incentives to Save and Invest

Adjustment Policy. The reduction or elimination of government credit controls would encourage savings and bring interest rates to market levels. Moreover, the allocation of funds would be determined by market forces. Thus, the artificial advantages to traditional lenders and borrowers, which are usually located in cities, would be removed.

Adjustment Policy. Decentralization and deconcentration of the financial systems, plus reform to make the system more efficient, would encourage the location of financial services in cities other than the larger ones.

The GOE response to these two policies consists of measures that supply liquidity, accompanied by processes that are selective in the allocation of credit. These include preferential interest rates to priority sectors. The aim is to eliminate processes that benefit short-term operations, and to eliminate intermediaries between banks and financial institutions.

Possible Impact. The response of GOE might partially address these two adjustment policies. If the measures to expand the availability of credit (such as real interest rates) and the reform of the financial system are enacted, economic activity might shift from large cities to other urban centers. These would then have access to credit, and they could do business with local financial institutions.

Public Fiscal and Investment Policies

Adjustment Policy. Measures to reduce the fiscal deficit that do not curtail investment on infrastructure and capital needed for the expansion of

the economy would likely shift resources from capital cities to other urban centers.

The GOE response is to rationalize public spending and to reduce unproductive public spending to levels that do not affect overall demand and economic growth. It recognizes a leading role of the public sector in the economy as a whole and, foremost, as facilitator of private investment.

Possible Impact. The impact of this response will depend on the extent of the cuts in public spending and the way that government positions are eliminated. To the degree that new jobs are created in smaller cities, new activities would be encouraged. This shift of public servants from large to smaller cities implies some decentralization or deconcentration of government. Otherwise, there would just be a transfer of public servants from one place to another. If the proposed public spending policies work, it is likely that some changes would occur in the process of urbanization. There might be an increase of public spending and investment in cities other than the capital, with a corresponding gain for smaller cities.

Decentralization Policies

Policies that strengthened central administration and planning from the fifties to the seventies accentuated the lack of municipal autonomy. National institutions that provided local services and controlled local resources were created and encouraged. However, the trend today is the reverse. In effect, decentralization appears to be a strong strategy of GOE to encourage national development that is increasingly based on local development schemes.

A decentralization policy that seeks to strengthen municipalities will have to examine the role of the provincial governments, so that conflicting or duplicated functions between these two levels of local governments can be eliminated. Municipal law assigns jurisdiction to the municipal government over the whole municipal territory. However, the municipalities have usually not intervened in the hinterlands. Most of their activities are located in the urban areas. Because municipalities have declined a role as economic agents for the whole "canton," they are perceived as caretakers when it comes to rural areas.

This reduction of influence by municipal governments over the municipal territory has been driven mostly by constraints on resources. Municipal governments can hardly cope with the demands in their major city (usually the municipal capital), and there are no resources left for actions in the rest of their territories. By comparison, it is usually the provincial governments that undertake the construction of roads and other capital investment projects in the rural areas. Thus, the provincial governments are perceived as the only instance of local government that intervenes in the

rural areas, and they are perceived as responsible for the rural municipal territory.

These operations must be balanced in a way that better reflects the legal mandates of the local governments; that appreciates the role of municipal governments within their territories, including rural areas; and that allows the provincial governments to play their real role as a development agent at the regional (provincial) level — not as a replacement for municipalities. For this to happen, municipalities will have to be convinced that they must extend their action to the whole of the municipal territory and break with the tradition of just dealing in the municipal capital.

There are two institutions that can help to shift this situation: the Association of Municipalities of Ecuador (AME) and its technical arm, the Institute of Municipal Development (INFODEM). Both institutions are interested in promoting policies of decentralization that will strengthen municipal governments. They are aware of the constraints affecting municipalities, but they still need some orientation to better understand the situation and possible solutions. They are young institutions and as such require technical assistance and training to better advance their functions.

AME has drafted municipal law reforms that have been presented for consideration to GOE. The proposals will strengthen the municipal governments, and they will help to correct many of the shortcomings that currently impede a decentralized local administration. The reforms address administrative, taxing, financial, and resource aspects of municipal law.

The main themes of the reforms are the improvement of local planning schemes based on local needs and demands, the differentiation of roles of municipal governments according to municipality category, the devolution of functions to municipalities and the reallocation of resources, the provision of financing to undertake new functions, technical assistance and training programs for municipalities to improve efficiency, the improvement of municipal management and administration of financial and human resources, the extension of coverage and the improvement of basic services, community participation in municipal projects and activities, and the organization of an information system to report successful experiences to other municipalities.

Close advisers to the President of the republic believe that municipal development policies should be supported by programs that strengthen AME and INFODEM. Support for the initiatives of AME would provide the opportunity to tackle decentralization from a macroeconomic level by helping to enact legislation and policy, and from a microeconomic level by addressing locally identified needs for improvement of municipal government.

Municipal development policies are supported by a large IDB/IBRD sectoral adjustment loan that will be channeled through Banco Ecuatoriano de Desarrollo (BEDE). The loan would empower municipalities in a way that

makes them financially self-reliant. This program will be geared only to cities and it will include capital investment, technical assistance, and training. The perception of BEDE, however, is that too much has been done in the past for cities and too little for rural areas. BEDE believes that programs to improve access to public services in rural areas should be included in urban development policies.

The Role of Other Donors in the Urban Sector

There are two major donors to consider at this time that will have significant impact on the urban sector. These are GTZ and a joint Inter-American Development Bank-World Bank sectoral adjustment loan. Both initiatives involve cities only, and both are geared toward municipal reform and development. As such, these programs are of direct impact to the urban development component of urbanization. They address major GOE priorities, namely, development of local governments, improvement of local resource mobilization, and strengthening of secondary cities. They do not address, however, rural development within the municipal territory, another high priority of GOE.

GTZ Program

GTZ has been assisting in municipal strengthening. It started with a pilot program at Babahoyo, from which it developed a methodology that is to be implemented in 10 cities in 1990.

The criteria that GTZ will apply to intervene in a given municipality are: (1) minimal installed technical capacity (the program seeks to strengthen a municipal institution, not to build one), (2) clear willingness of the mayor to be part of the program, and (3) confirmed intention of GOE to support the municipality to be assisted. The program is directed at urban areas only, with a preference for secondary cities in the municipal territories.

The following methodology is applied in each intervention. First, a municipality is selected according to the above criteria and to GOE priorities developed by FONAPRE, BEDE, the National Secretariat for Administrative Development, and CONADE. Second, the administrative staff of the selected municipality is supported to produce, in approximately two months, a portfolio of projects that are meaningful for services and economic development of the city. Third, the portfolio is presented to the community (through "cabildos abiertos," which are like town meetings), and the community sets priorities and selects the projects that will be implemented. Community participation thus exercised is a crucial step in the GTZ program. Fourth, the selected capital investment projects are implemented through the appropriate national institution and the municipality. Finally, technical assistance

and training are provided to the municipality. This consists of planning, administration, and finances (simple accounting systems, planning systems oriented to capital investment projects, budgeting, project execution, and supervision).

The aim of the program is to provide municipalities with the capacity for self-sustained development. In this effort, GTZ is also considering whether to support INFODEM and AME. Other national institutions that also receive technical assistance through their involvement in the program are BEDE, FONAPRE, and the Ministry of Finance.

GTZ also has a small-scale housing program that supports BEV and JNv.

Sectoral Adjustment Loan of IDB and the World Bank

The World Bank and the Inter-American Development Bank (IDB) are collaborating in implementing a municipal development project for Ecuador. The World Bank's part consists of sectoral adjustment, technical assistance, and public works to support fiscal and administrative reform among municipal governments and to expand and improve basic municipal infrastructure services. It includes funds for housing construction.

The IDB's part consists of a loan of approximately \$200 million to BEDE, of which the bulk would be for capital investment. The project supports decentralization policies of GOE that should encourage financial autonomy of municipalities. The project will facilitate the gradual disappearance of FONAPAR and its corresponding legal reform, and it will strengthen municipalities' capacities for financial administration and accounting. BEDE, and not the Ministry of Finance, will manage a subsidy fund that will be instituted. Subsidies will be given only when they are linked to loans and technical assistance.

The funds from the IDB loan will finance priority projects, including sites and services, but they will not be given for housing construction and projects to enhance the municipal tax collection capacity. All 162 municipalities of Ecuador are eligible for credits, provided that they fulfill criteria related to its operational, institutional, and financial capabilities. Quito and Guayaquil together could share a maximum of 40 percent of the funds.

All municipalities may apply for technical assistance, but this is not a requirement. However, in many cases, this could help municipalities to meet the eligibility criteria for obtaining loans. A pre-appraisal mission for this program was completed in December 1989. According to sources in BEDE, the process for loan approval will go to the next step, and it is expected that the loan will eventually be approved.

A preliminary list of projects has been selected and will be analyzed for first disbursements. The following table (Table 3.1) does not include projects for Quito and Guayaquil.

Table 3.1. Potential IDB Urban Infrastructure Projects

Type of Project	Location
Water supply	Ibarra, Catamayo, Quininde, Puyango
Sewage	Catamayo, Ventanas, Pedro Carbo, Milagro
Drainage	Catamayo, Pedro Carbo, Milagro
Streets, terminals, and markets	Antonio Ante, Chone, Cuenca, Ambato, Latacunga Milagro, Portoviejo
Slaughter houses	Cayambe, Ambato
Cemetery	Jipijapa
Solid waste disposal	Huaquillas, Sucre, Cuenca
Green areas and tree nurseries	Salcedo, Jipijapa, Cuenca

Source: Provisional list provided by BEDE (unpublished, 1989)

These projects represent an investment of \$55 million.

The interventions of GTZ, IDB, and the World Bank will have significant impact on municipal development in Ecuador. IDB and the World Bank will intervene in at least 18 cities (Ibarra, Catamayo, Quininde, Puyango, Ventanas, Pedro Carbo, Milagro, Antonio Ante, Chone, Cuenca, Ambato, Latacunga, Portoviejo, Cayambe, Jipijapa, Huaquillas, Sucre, and Salcedo), while GTZ will intervene in 10 cities (it is not clear whether these will include any of the cities assisted by the IDB/World Bank project). It is likely that AME and INFODEM will emerge much stronger from these efforts, as will the national institutions that will be involved (BEDE, FONAPRE, etc.).

If these efforts are successful, important improvements will be observed in the short run in the area of municipal development. Hence, the conditions in the country will be favorable for decentralization policies and, in all likelihood, other municipalities will want to benefit from similar programs, or they will apply for loans.

IV. STRATEGIC FRAMEWORK FOR USAID/ECUADOR

As USAID/Ecuador continues with the work of developing an urban strategy for its development assistance program, RRNA suggests that it investigate certain broad themes and assess these in the light of clearly established criteria. Presented below is a short list of key criteria that RRNA proposes for evaluating alternative strategy options. This is followed by several areas of initiative that RRNA believes should be considered further as main themes or components of an urban strategy.

Criteria for Strategy Assessment

There are six criteria being proposed for assessing urban strategy alternatives:

- Relevance to principal economic development objectives, especially that of alleviating poverty
- Relation to other donor programs
- Relation to the comparative advantages and strengths of A.I.D.
- Financial feasibility
- Political feasibility in relation to GOE priorities and other pressing bilateral issues
- Institutional feasibility

Each of these criteria is discussed briefly below in relation to developing an urban strategy for Ecuador.

Relevance to Economic Development Objectives

An indispensable first step in the process of strategy development is the specification of clear objectives. At the broadest level, USAID/Ecuador has formulated a clear objective for its urban strategy, and that is the alleviation of poverty. A well-designed urban strategy should help to reduce the incidence and the severity of poverty in both urban and rural areas, and, in principle at least, the extent of poverty provides a clear indicator of success or failure for evaluating the strategy in the future.

A broad goal such as the alleviation of poverty needs to be further articulated in terms of more operational objectives, however, and generally speaking the more specific the statement of such objectives, the better. However, a strategy that is intended to last over a period of years — one that is inherently as broad as the proposed urban development strategy for Ecuador — must involve objectives that are more general and that are flexible enough to be adjusted.

Instead of defining specific objectives for an urban development strategy for Ecuador, RRNA identified, in Chapter I, seven broad areas that in our opinion will challenge GOE economic policy makers during the 1990s, regardless of party affiliation or ideological persuasion. RRNA contends that these are the main economic issues that will be faced by this and succeeding governments. Specific policy and program objectives of these governments — and the objectives of their urban development strategies — will almost inevitably be framed in terms of these issues, with variations limited, for the most part, to differences of emphasis or approach. The seven big development challenges identified in Chapter I were as follows:

1. Generating employment
2. Developing human resources
3. Improving fiscal performance
4. Maintaining price and exchange-rate stability
5. Promoting growth and diversification of exports
6. Financing capital investment
7. Improving the quality of life

One of the tests that must be passed by any proposed element or component of an urban strategy, RRNA suggests, is that it contribute to the

achievement of some clearly defined objective in one or more of the above areas, without materially slowing progress on any of the other main fronts. For example, proposals for generating employment must not negate GOE's efforts to improve fiscal performance or to maintain price and exchange rate stability. Conversely, policy measures aimed at maintaining price and exchange-rate stability should not undermine efforts to promote the growth and diversification of exports. Moreover, improved fiscal performance should not come at the price of reduced efforts in developing human resources or in implementing adequately financed priority capital investment programs. Finding the appropriate balance between objectives in each of the above areas is the main challenge in designing a responsive urban strategy for development assistance in Ecuador.

Relation to Other Donor Programs

There is no need to restate here the well-known case for improved coordination among donors, despite the fact that there is great latitude for such improvement. Rather, in the context of urban strategy development for USAID/Ecuador, RRNA wishes only to point out that the other main players in the urban field are the World Bank/IDB and GTZ. Both programs, which were described in more detail in Chapter III, are structured along conventional urban development project lines, emphasizing the financing of urban infrastructure accompanied by some efforts at municipal administrative strengthening. These are important needs in Ecuador. The projects that have been developed by these other donors will have broad coverage, and they are expected to have a major impact. There are, nevertheless, multiple opportunities to develop complementary interventions, and USAID, which is taking a much broader view of urban issues in economic development, might be uniquely qualified to undertake them.

Relation to the Comparative Advantages and Strengths of A.I.D.

Despite a predominant emphasis on rural development during the last 20 years, A.I.D. has accumulated vast experience in several areas that are related to the subject of urban development, broadly defined. In addition to core expertise in solving urban shelter, infrastructure, and finance problems, A.I.D.'s experience with the other key areas listed below is comparable or greater than that of any other donor. The breadth of its prior experience, along with its apparent headstart in addressing implications of urbanization in the developing world, provides it with the means for resuming a position of leadership among donor agencies.

RRNA would cite the following strengths of A.I.D. relevant to urban development:

- Macroeconomic and financial sector policy analysis
- Private sector support and employment generation
- Micro-, small, and medium-sized enterprise development
- Environmental, health, population, and nutrition programs
- Integrated rural development, agricultural marketing, and urban functions in rural development
- Community development and institution building
- Export and investment promotion

Financial Feasibility

Regrettably, being innovative is almost never enough. The U.S. bilateral development program has, in recent years, been stretched to respond to an ever-increasing number of special situations that are critical priorities either for the Congress or for the Administration, but it has not been allocated the increased resources necessary to do these special jobs and fulfill its development mandate. The urgent need for the United States to support the destalinization of eastern Europe, and the demands that will inevitably be placed on the United States to shoulder the reconstruction of the Panamanian economy, are only the latest special situations that are making unexpected demands on already strained A.I.D. resources. In A.I.D.'s attempt to meet these and other demands, there is a danger that countries such as Ecuador — "middle-income," non-revolutionary, and so far only tangentially affected by international drug traffickers — will receive substantially less than other recipients of U.S. aid. Resource constraints might be so tight as to render the whole purpose of strategy development questionable.

Under the best of circumstances, A.I.D. resources will be limited. This restricts leverage with the Ecuadorean government on policy questions, and it puts "big-ticket" project financing out of reach. Much of the potential A.I.D. contribution to the implementation of an urban strategy might therefore be preempted by the lack of financial resources. Many otherwise viable options for inclusion in the urban strategy will regrettably, but predictably, fail this test.

Broadened loan guaranty powers, such as those granted for the housing guaranty program, could make a significant difference in this discouraging scenario. Such powers would allow A.I.D. to leverage large pools of private

sector financial resources, perhaps even non-U.S. resources. In RRNA's opinion, it is unlikely, but possible, that the U.S. government guaranty mechanism might also be applied within developing countries to help channel local banking sector resources into development project financing. To the extent that such resources are available for these purposes, governments of developing countries might be expected to prefer to use mechanisms at their disposal, including guaranty programs or bond issues themselves, thus retaining closer monetary control and greater autonomy in the use of these funds.

Political and Institutional Feasibility

Although these points do not require elaboration, it is important to remember that all strategy options must also be checked against these criteria. Political constraints or institutional deficiencies might result in modifying the strategy, but they might also merely require the adaptation of appropriate tactics for implementing the strategy. The need to implement institutional development programs before attempting major operational reforms might, for example, affect the sequence but not the nature of the main components of the urban development strategy.

Themes of a USAID/Ecuador Urban Program

Six broad elements, or "themes," of an urban development strategy for Ecuador have been identified. Each contributes in a substantial way to the alleviation of poverty in both urban and rural areas. The six themes listed below are fully consistent with A.I.D. policy as enunciated in the Agency's report to Congress, dated February 14, 1989, and entitled "Urbanization in the Developing Countries."

- Theme 1: Supporting sound economic development policies
- Theme 2: Generating urban employment
- Theme 3: Promoting efficient urban management
- Theme 4: Mobilizing resources to finance urban development
- Theme 5: Improving rural-urban linkages
- Theme 6: Improving the quality of life and preserving the environment

In what follows below, RRNA briefly elaborates on each of these themes, pointing out ways in which A.I.D. can involve itself in them.

1. Supporting Sound Economic Development Policies

Clearly, the realm of providing technical assistance in policy analysis advising developing country governments is one in which A.I.D. has long and successful experience. In the context of implementing a broad urban strategy, in Ecuador, assistance in the areas of macroeconomic policy, employment and labor policy, financial sector policy, trade policy, human resources development policy, and public sector organization and management policy is relevant, needed, and likely to be well received.

A.I.D. is well-positioned to supply technical assistance in policy analysis and dissemination. Such assistance can be an effective means of influencing the allocation of government and other donor resources. Once a broad urban strategy is established — a process that must actively involve representatives of the Ecuadorean government as well as representatives of other Ecuadorean institutions (e.g., business associations, universities, and research foundations) — a multi-year program of policy research and analysis should be established. RRNA believes that this program should be implemented for a period of years, with the outputs of the activity serving as the basis for ongoing dialogue, dissemination, monitoring, and review of progress in achieving the objectives of the urban strategy.

A.I.D. can also, of course, support policy dialogue and policy reform through conditionalities attached to ESF and other financing programs. Relative to other donors, however, A.I.D. has few resources to offer in Ecuador, with correspondingly small leverage to enforce conditionality. This situation, for reasons alluded to above, is likely to get worse. A.I.D. might therefore be well advised to adopt a collegial approach with respect to its policy analysis and dialogue activities with GOE, especially since, unlike the situation in some other countries, the IMF and World Bank appear to be ready to apply the necessary conditionalities to support the policy reform process.

2. Generating Urban Employment

In addition to what it can do to promote job creation in productive activities through its support and participation in the policy dialogue, A.I.D. is well-placed to assist directly in the process of generating employment through a variety of project vehicles. A.I.D. has extensive experience, for example, in the design and implementation of the following:

- Micro- and small-enterprise development projects, including the components of training, technical assistance, and credit delivery
- Vocational skills training projects, including both technical and management training
- Private sector organizational development and advocacy projects, such as those organized in many countries to strengthen business associations, to improve the services provided to their membership, and to help these associations represent business interests with the government
- Export and investment-promotion projects aimed at accelerating the rate of structural transformation of the economy, presumably in favor of sectors in which the country has strong comparative advantages (advantages that are usually labor-intensive in developing countries)

Projects such as these aim at facilitating, over the medium term, structural changes that tend to favor job creation primarily through fostering sustainable economic growth. In some cases, such projects also facilitate a transition back to technologies that are more in line with the relative scarcity of capital and labor in the domestic economy. A.I.D. can, of course, also contribute to job creation in the short term, through the development and financing of shelter and urban infrastructure projects. Both types of projects directly employ large numbers of relatively unskilled workers, and they also generate a substantial number of indirect jobs in related industries such as building materials, transportation, and finance.

Investment in urban infrastructure is a high priority in Ecuador, as has been discussed in preceding chapters. Providing water and sewage services has a direct and immediate impact on community health, and hence on labor force productivity. Where such investment projects are justified on physical and economic terms, and where there is some slack in the unskilled labor market, the usefulness of such projects as quick-acting job generators and macroeconomic pump primers has long been recognized.

3. Promoting Efficient Urban Management

Unlike the 1970s, but very much like the 1980s, the present decade is almost certainly going to be characterized by extremely tight resource constraints for public administrations at all levels. Unless specific, targeted

remedial actions are taken, this is most likely to be true for municipal governments.

Municipal and other forms of local government in Ecuador have a critical role in expanding resource mobilization, especially by greatly improving their cost recovery performance in the delivery of urban services and by significantly improving the efficiency of resource utilization at the local level. The importance of improving the performance of local government is increasingly being recognized, but those who would enlarge its role are also forced to confront serious institutional inadequacies at the local level. These include low levels of staffing in relation to expanded responsibilities, poor staff training, inadequate management training and skills, and the lack of access to microcomputer-based data processing, analytic, and control systems.

In RRNA's view, a major effort should be organized in conjunction with other donors to introduce such systems into municipal and provincial governments in Ecuador and to provide managements and staffs with the training required to assimilate them successfully. Obviously, this is a multi-year effort, and it will be relatively expensive. Assuming only that top-level GOE commitment to such a program would be sustained, there is no doubt that financial and economic feasibility analysis would show extraordinarily high returns to the proposed investment in urban management efficiency.

4. Mobilizing Resources to Finance Urban Development

Development assistance in this area falls into two major categories: public finance, including the local level, and financial market development, with emphasis on the capital markets. Both are areas in which A.I.D. has significant experience and resources to offer through policy dialogue, technical assistance, and project financing.

One of the great underappreciated realities of our time is the extent to which developing countries have to become financially self-reliant if they are to succeed in reactivating their economies during this decade. Private international commercial banks are not coming back, no matter how the current debt problem is resolved, and official development assistance (ODA), though significantly expanded at the global level, has not expanded nearly enough to make up the shortfall. About the best that can be hoped for on the external front is that the debt service burden can be reduced to the point that net resource transfers to developing countries can be made positive once again. Trying to grow rapidly while exporting capital is no easy task.

Developing countries in Latin America, Ecuador included, will have to sharply increase their domestic savings rates during this decade if they are

to resume their growth in the face of a decline in the availability of foreign resources. In Ecuador, the consolidated public sector, estimated by the IMF to be generating revenues equal to 23 percent of GDP in 1989 while spending almost 27 percent, will have to continue working to reduce the overall size of its deficit and the corresponding volume of savings that it diverts from other economic uses. Local government can make an important contribution to the public sector savings effort, both by markedly improving locally based revenue collections and by improving the efficiency of expenditures. A.I.D. can most certainly be of major assistance in this regard.

Reducing the public sector deficit will also make an important contribution towards the restoration of price stability in Ecuador, a factor that, along with interest-rate policies, is crucial to the ability of the financial system to fulfill its role in the mobilization and allocation of savings in the economy. A.I.D. must maintain its concentration on financial sector reform in the context of the policy research and analysis program alluded to above. In addition, project-level assistance aimed at facilitating access to financial market technology and infrastructure as well as at providing technical support to public and private institutions operating in the financial markets should be considered as a high priority for the proposed urban development strategy.

5. Improving Rural-Urban Linkages

As was briefly pointed out in Chapter I, cities and the rural areas of a country form part of a closely interlinked and interdependent economic system. The development of rural areas depends crucially on initiatives taken in urban areas that might at first appear quite unrelated, while the ability of the urban economy to respond to certain challenges — to create a sufficient number of relatively well-paying jobs, for example — might depend on the ability of the rural economy to produce the required inputs for industrialization. Rural and urban areas are "linked" by a variety of physical systems and institutional arrangements that convey people, goods, services, and information. Improving the coverage and efficiency of such linkages is a way in which the efficiency of the mutually dependent urban and rural components of the economic system can be enhanced.

A.I.D. and other donors have substantial experience providing technical and project assistance aimed at improving rural-urban linkages, though not all of the activities undertaken are recognized as having this effect. The most obvious examples of such assistance include transportation, storage, and communications infrastructure projects in rural areas. Other, less obvious examples of improvements in rural-urban linkages include rural education programs, private sector institutional development, marketing extension, urban nutrition programs, and small-enterprise development.

Additional research into the nature of rural-urban linkages, disaggregated regionally, is proposed for Ecuador as part of the process of

further developing an urban development strategy. This work will suggest specific opportunities for A.I.D. assistance in this area.

6. Improving the Quality of Life and Preserving the Environment

Finally, RRNA suggests that a major theme of an urban development strategy for Ecuador — one that has distinct meaning on its own but that also interrelates closely with each of the other main themes proposed — is improving the quality of the lives of Ecuadorean citizens and helping them to maintain the economic and aesthetic values of their physical environment. Shelter, water, and sewage system construction projects come immediately to mind when considering initiatives encompassed by this theme, but so too do improved urban transportation systems, extension programs in the appropriate use of agricultural chemicals, and the introduction of rational controls and reasonable alternatives for developing agriculture in the Amazon region of the country.

Quality-of-life and environmental issues have both short- and long-term dimensions. Likewise, some project interventions will have immediate and visible effects, while others will generate benefits only in the long term. Often, the longer-term cost and benefit aspects of environmental issues are difficult for the general public to perceive and comprehend, giving rise to the need for concerted educational efforts so that the necessary political support for environmentally oriented programs can be generated. The development of long-term plans, close ongoing collaboration with GOE, and continuing education of the Ecuadorean public are essential features of developing a program that is feasible, that is effective, and that is also seen to be effective.

V. REQUIREMENTS FOR FURTHER DATA COLLECTION AND ANALYSIS

Implementation of an urban development strategy will involve a great deal of continuing research and analysis on a range of subjects too wide to be specified now. The further studies proposed here are not aimed at implementation, but at providing the additional information that RRNA believes would help USAID/Ecuador refine and complete the urban development strategy that it is engaged in preparing. RRNA has consciously tried to keep the number of additional studies to a minimum, and the firm proposes three, which are described briefly below.

Synopses of Proposed Studies

1. The Role of the Private Sector in Urban Services

An investigation into the present and future potential role of the private sector in the financing and/or provision of urban services is proposed. Electricity distribution, urban transport, market facilities, garbage collection, and other services have been successfully organized and managed by private companies in a number of countries, and these could be privatized in Ecuador. Other services, such as water supply and sewage system operations, can at least in principle be managed by private companies working under contract to local authorities. Build, operate, and transfer (BOT) contracts are becoming more widely used in certain countries as a means of involving private investors in the financing of capital projects such as electric power generation. These and other mechanisms for involving the private sector in service supply in urban areas should be investigated as input to the final formulation of the A.I.D. urban strategy in Ecuador.

This study need not be time-consuming, expensive, or labor-intensive. An identification and listing of the activities that private companies could undertake, and a canvassing of informed opinion among public and private sector groups on the feasibility of turning these over to private management, is essentially all that is required. The study could easily be accomplished

with only local resources, and it should not take longer than four to six weeks.

2. Alternative Roles for Local Government

A study describing in some detail the current division of authority and functions between the national, provincial, and municipal levels of government should be undertaken. The study would also describe alternative arrangements prevalent in other Latin American and European countries. This would provide a basis for evaluating the desirability of moving towards some fundamental reallocation of powers and responsibilities between the various levels of government in Ecuador with respect to financing and providing urban services.

Unlike the United States, municipal and provincial governments in Ecuador play a minimal, passive role in the promotion of economic development within their respective jurisdictions. The study on alternative roles for local government should identify and evaluate changes that could be made to give these governments greater authority in shaping and implementing public sector development efforts locally. Among the most important issues to be considered is the validity of entrusting local governments with greater authority over the administration of rural development programs within their geographical spheres of influence. The present system seems to leave all responsibility for rural development to the national government, essentially by default, and it seems plausible that locally based institutions might be more sensitive and responsive to local development needs in rural areas. Clearly, the financial feasibility of such a reorganization of services delivery systems would need to be evaluated thoroughly.

A wide range of institutions in Ecuador interact with the municipalities, variously as regulators, financiers, representational institutions, and support institutions. CONADE, the Ministry of Finance, the Comptroller General, BEDE, AME, and INFODEM are only a sample of these. Urban development specialists in Ecuador contend that unclear jurisdictions and overlapping roles among such institutions impede the efficiency of the municipalities in carrying out their functions. RRNA believes that A.I.D. should develop a better understanding of the respective urban development and management roles of these institutions, in practice as well as in theory, and conduct its own appraisal of the organizational efficiency of the present setup as part of the analysis of alternative roles for local government units.

3. Research into Urban Poverty and the Nature of Rural-Urban Economic Linkages

Reliable statistical information on income levels and income distribution in urban areas is grossly inadequate, as is information on the correlation of income with a variety of quality-of-life indicators relating to shelter and access to urban services. Improved availability of such information is a prerequisite for program planning and implementation in the urban areas of Ecuador.

As important as having more reliable information on the extent and severity of poverty in the different urban areas of Ecuador is having a better understanding of the causes of poverty in each of these settings. While it is possible to generalize on the causes of urban poverty — we have pointed out the relationship of poverty to unemployment and an uneven distribution of physical and human capital in foregoing chapters — any serious attempt at alleviating poverty must go beyond such facile generalizations and begin with a solid understanding of the specific causes of poverty in specific locations and at specific times. It is important that USAID/Ecuador devote the time and resources necessary to improving its understanding of the specific, immediate causes of urban poverty in at least a selection of Ecuadorean cities as part of the further development of a solidly grounded urban strategy for the country. RRNA recommends that the statistical work referred to in the previous paragraph be concentrated on Quito and three or four other representative cities in which A.I.D. has a high probability of developing programs, and that this statistical work be complemented by a disaggregated, dynamic analysis of poverty trends and their causes.

Undoubtedly, poverty will exhibit different trends and different characteristics in each of these urban areas. These differences will suggest different approaches to poverty alleviation in each case. Some common themes will undoubtedly also be discovered, and one of these will undoubtedly be the relationship of unemployment and poverty to the rate of general economic growth of the city in question, and, in turn, the relationship of that rate of economic growth with the health and growth of the surrounding rural areas.

Further investigation and analysis of the nature and dynamics of rural-urban linkages, by region and by urban area of influence within regions, is required to understand how GOE and foreign assistance donors can most effectively intervene for development purposes. Such analysis should be incorporated in the proposed study of urban poverty. Geographically disaggregated as described above, the analysis would aim at improving knowledge and understanding, and it would also seek to identify specific project and program interventions needed to improve infrastructure, promote the provision of required services, and otherwise improve the efficiency of key rural-urban "links."

ANNEX

Table A1. Calculation for the Factor of Satisfaction of Basic Needs, Alternative I

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Region	Province	Canton	Coverage of basic needs					Quality of Life Index (FSBN) 3/	FSBN Ranking I	
			Urban Population 1989	Water XA= 0.3	Sewage XB= 0.2	Mal-nutrition 1/ XC= 0.2	High School Housing 2/ XD= 0.15 XE= 0.15			
COSTA	GALAPAGOS	San Cristobal	2,321	88.40	22.50	16.00	20.03	67.10	60.89	1
SIERRA	PICHINCHA	Ruminahui	21,732	77.00	59.10	45.00	18.66	68.30	58.96	2
COSTA	GUAYAS	Guayaquil	1,699,375	64.90	49.20	32.00	21.73	72.10	56.98	3
SIERRA	PICHINCHA	Quito	1,233,865	79.70	70.00	71.00	26.40	61.70	56.92	4
COSTA	EL ORO	Pasaje	34,586	74.60	45.60	32.00	11.89	66.30	56.83	5
SIERRA	TUNGURAHUA	Banos	11,673	81.30	51.80	42.00	10.95	56.00	56.39	6
COSTA	PASTAZA	Mera	662	68.40	52.60	29.00	14.85	59.10	56.33	7
SIERRA	LOJA	Loja	103,183	78.20	51.80	42.00	17.21	55.40	56.31	8
COSTA	EL ORO	Santa Rosa	38,802	74.70	41.40	31.00	11.54	63.10	55.69	9
SIERRA	CARCHI	Tulcán	40,839	71.50	55.60	38.00	14.47	55.30	55.43	10
COSTA	GUAYAS	Milagro	112,089	76.90	26.30	33.00	11.93	71.60	54.26	11
COSTA	MANABI	Portoviejo	156,250	62.10	39.30	40.00	13.79	76.30	52.00	12
SIERRA	CARCHI	Espejo	4,092	71.90	34.00	38.00	9.68	63.60	51.76	13
SIERRA	IMBABURA	Antonio Ante	15,291	82.20	34.40	54.00	9.26	61.90	51.41	14
COSTA	EL ORO	Machala	158,798	59.40	43.90	40.00	17.62	66.40	51.20	15
COSTA	GALAPAGOS	Santa Cruz	4,523	73.70	2.20	28.00	18.18	68.60	49.97	16
SIERRA	IMBABURA	Ibarra	72,016	76.40	41.50	60.00	12.34	55.20	49.35	17
COSTA	EL ORO	Portovelo	4,879	59.90	40.60	51.00	9.68	76.60	48.83	18
COSTA	EL ORO	Pinas	11,566	65.60	32.20	55.00	7.11	81.40	48.40	19
COSTA	MANABI	Manta	149,011	76.70	30.80	68.00	12.05	73.20	48.36	20
SIERRA	AZUAY	Cuenca	218,490	61.10	45.10	63.00	15.98	69.80	47.62	21
SIERRA	CHIMBORAZO	Riobamba	98,554	69.40	44.40	69.00	15.32	55.70	46.55	22
COSTA	ESMERALDAS	Esmeraldas	130,944	53.80	29.00	44.00	12.45	70.30	45.55	23
COSTA	EL ORO	Zaruma	6,822	47.40	27.30	35.00	8.25	76.70	45.42	24
SIERRA	TUNGURAHUA	Ambato	133,643	52.90	42.90	53.00	13.20	61.80	45.10	25
SIERRA	PICHINCHA	Santo Domingo	119,127	50.30	37.20	36.00	7.13	56.40	44.86	26
COSTA	GALAPAGOS	Isabela	805	58.40	1.50	23.00	12.35	63.50	44.60	27
SIERRA	LOJA	Macará	14,220	63.10	23.50	50.00	7.78	64.60	44.49	28
SIERRA	PICHINCHA	Mejía	8,580	58.60	30.80	57.00	10.75	68.70	44.26	29
SIERRA	LOJA	Catamayo	14,321	67.70	28.90	52.00	5.74	39.80	42.52	30
COSTA	LOS RIOS	Urdaneta	4,118	33.50	20.50	24.00	5.25	73.20	41.12	31
COSTA	LOS RIOS	Babahoyo	60,569	45.30	22.50	47.00	9.48	72.20	40.94	32
SIERRA	CARCHI	Montúfar	14,146	54.90	29.70	54.00	6.34	55.00	40.81	33
COSTA	PASTAZA	Pastaza	15,731	44.20	30.80	41.00	9.26	49.70	40.06	34
COSTA	EL ORO	Huaquillas	32,577	49.50	1.80	34.00	7.67	69.40	39.97	35
COSTA	Z.CHINCHIPE	Zamora		49.80	25.90	46.00	7.56	49.00	39.40	36
SIERRA	PICHINCHA	Pedro Moncayo	2,125	64.40	15.30	64.00	3.73	60.30	39.18	37
COSTA	Z.CHINCHIPE	Yantzaza	4,758	45.60	15.30	34.00	4.83	55.70	39.02	38
SIERRA	TUNGURAHUA	Santiago de Pil	5,272	53.10	13.60	52.00	5.86	65.40	38.94	39
COSTA	EL ORO	Arenillas	13,029	46.40	15.70	45.00	8.07	63.50	38.80	40
COSTA	GUAYAS	Naranjito	14,770	49.60	18.80	50.00	5.46	61.90	38.74	41
COSTA	GUAYAS	Naranjal	14,684	39.20	8.70	32.00	3.71	72.20	38.49	42
COSTA	EL ORO	El Guabo	10,669	49.80	11.50	49.00	6.24	65.90	38.26	43
SIERRA	CARCHI	Mira	2,909	53.50	17.50	55.00	4.63	59.40	38.15	44
SIERRA	CANAR	Biblián	4,370	42.30	13.00	46.00	3.88	72.70	37.58	45
COSTA	GUAYAS	Yaguachi	10,088	36.70	10.70	32.00	5.43	65.60	37.40	46
COSTA	LOS RIOS	Quevedo	101,155	37.70	15.60	40.00	7.15	65.90	37.39	47
SIERRA	PICHINCHA	Cayambe	18,663	41.50	24.50	48.00	6.54	52.70	36.64	48
SIERRA	COTOPAXI	Latacunga	38,482	41.20	21.40	47.00	8.56	52.80	36.44	49
COSTA	M.SANTIAGO	Santiago	1,701	33.60	16.70	39.00	6.25	63.40	36.07	50
SIERRA	LOJA	Calvas	13,046	34.70	21.30	44.00	7.19	60.60	36.04	51
SIERRA	TUNGURAHUA	San Pedro de Pe	5,857	54.00	12.20	64.00	4.31	63.00	35.94	52
COSTA	M.SANTIAGO	Gualaquiza	4,228	29.90	15.30	27.00	4.58	57.30	35.91	53
SIERRA	IMBABURA	Otavalo	23,494	51.80	26.50	64.00	7.62	44.80	35.90	54
SIERRA	CHIMBORAZO	Guano	7,522	66.10	11.00	78.00	3.21	56.90	35.45	55
COSTA	GUAYAS	Samborondón	9,703	29.70	6.60	32.00	5.17	70.90	35.24	56
SIERRA	CANAR	Azogues	19,317	36.70	17.20	60.00	8.25	74.20	34.82	57
COSTA	LOS RIOS	Puebloviejo	5,563	31.10	7.40	42.00	4.21	77.60	34.68	58
COSTA	M.SANTIAGO	Limón Indanza	3,250	38.20	12.90	50.00	4.02	66.00	34.54	59
SIERRA	BOLIVAR	San Miguel	5,025	39.80	17.30	63.00	7.83	65.80	33.84	60
SIERRA	LOJA	Puyango	4,041	34.30	11.80	44.00	3.48	61.90	33.66	61
COSTA	MANABI	Rocafuerte	8,095	36.40	1.70	44.00	5.25	67.60	33.39	62
COSTA	NAPO	Quijos	442	34.30	14.90	49.00	5.18	60.70	33.35	63
SIERRA	LOJA	Celica	4,342	38.40	14.60	54.00	4.22	59.50	33.20	64
SIERRA	BOLIVAR	Chimbo	3,685	34.00	10.70	48.00	6.17	63.30	33.16	65
SIERRA	TUNGURAHUA	Patate	2,377	44.20	13.90	69.00	5.30	64.70	32.74	66
COSTA	M.SANTIAGO	Sucua	5,866	37.20	1.30	45.00	5.42	61.40	32.44	67
SIERRA	BOLIVAR	Guaranda	16,829	33.30	20.60	53.00	6.49	51.50	32.21	68
SIERRA	LOJA	Paltas	6,447	36.80	9.50	47.00	4.08	53.60	32.19	69
COSTA	MANABI	Chone	48,557	29.50	10.30	51.00	5.82	70.70	32.19	70

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Table A1. Calculation for the Factor of Satisfaction of Basic Needs, Alternative 1

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Region	Province	Canton	Urban Population 1989	Coverage of basic needs					Quality of Life Index (FSBN) 3/	FSBN Ranking 1
				Water XA= 0.3	Sewage XB= 0.2	Mal- nutrition 1/ XC= 0.2	High School XD= 0.15	Housing 2/ XE= 0.15		
COSTA	LOS RIOS	Ventanas	25,382	25.07	10.00	46.00	4.52	74.20	32.11	71
SIERRA	TUNGURAHUA	Quero	1,670	35.10	9.50	42.00	2.47	51.20	32.08	72
SIERRA	CHIMBORAZO	Chunchi	3,895	44.20	20.60	66.00	3.73	47.50	31.86	73
COSTA	MANABI	Sucre	15,030	26.80	0.00	38.00	4.48	70.60	31.70	74
COSTA	Z.CHINCHIPE	Chinchipe	3,021	46.30	7.50	64.00	4.78	52.80	31.23	75
COSTA	M.SANTIAGO	Morona	8,365	31.90	17.40	45.00	5.33	41.90	31.13	76
SIERRA	IMBABURA	Cotacachi	6,144	37.20	16.10	54.00	4.34	43.20	30.71	77
COSTA	GUAYAS	El Empalme	26,178	16.30	2.10	32.00	3.61	74.10	30.57	78
SIERRA	AZUAY	Gualaceo	9,124	34.40	11.10	64.00	3.19	66.70	30.22	79
SIERRA	LOJA	Sozoranga	875	24.60	2.30	42.00	2.95	62.50	29.26	80
COSTA	ESMERALDAS	Sun Lorenzo	15,281	32.20	6.90	41.00	4.00	37.20	29.02	81
SIERRA	LOJA	Saraguro	2,561	34.00	5.80	58.00	2.80	58.50	28.95	82
SIERRA	LOJA	Gonzanamá	1,887	33.90	6.70	57.00	3.60	53.60	28.69	83
COSTA	MANABI	Bolívar	12,747	20.70	7.50	50.00	3.55	68.80	28.56	84
COSTA	LOS RIOS	Vinces	20,739	20.20	11.60	55.00	4.30	70.10	28.54	85
SIERRA	IMBABURA	Pimampiro	5,277	47.20	17.60	81.00	2.59	43.60	28.41	86
COSTA	NAPO	Tena	8,127	30.10	17.50	66.00	7.21	50.60	28.00	87
COSTA	MANABI	Santa Ana	7,572	19.40	1.40	48.00	2.91	72.60	27.83	88
COSTA	GUAYAS	Balzar	26,074	29.30	12.90	70.00	3.20	65.10	27.61	89
SIERRA	AZUAY	Girón	3,296	27.60	8.70	66.00	2.62	66.50	27.19	90
COSTA	MANABI	Montecristi	10,634	37.40	4.60	83.00	4.48	73.00	27.16	91
COSTA	SUCUMBIOS	Sucumbios	272	19.90	6.00	42.00	4.30	51.40	27.13	92
COSTA	SUCUMBIOS	Putumayo	1,336	0.00	0.00	42.00	7.03	37.80	26.72	93
SIERRA	COTOPAXI	Salcedo	7,824	26.00	12.70	60.00	5.12	47.90	26.29	94
SIERRA	AZUAY	Paute	2,947	28.00	6.60	71.00	3.01	68.70	26.28	95
SIERRA	LOJA	Zapotillo	1,168	16.40	0.00	48.00	2.82	67.80	25.91	96
SIERRA	AZUAY	Santa Isabel	2,718	26.60	5.00	48.00	2.29	41.10	25.89	97
SIERRA	BOLIVAR	Chillanes	2,865	18.40	13.60	59.00	3.31	59.10	25.80	98
COSTA	MANABI	Junín	4,543	26.70	3.60	72.00	4.85	68.20	25.29	99
SIERRA	COTOPAXI	Squisilí	3,460	38.40	9.70	75.00	5.16	36.20	24.66	100
COSTA	ESMERALDAS	Eloy Alfaro	4,582	13.00	1.90	45.00	2.60	55.50	24.00	101
COSTA	GUAYAS	Daule	27,141	4.20	0.40	38.00	3.64	63.70	23.84	102
SIERRA	AZUAY	Sigsig	4,170	21.50	8.40	73.00	1.99	65.90	23.71	103
SIERRA	COTOPAXI	Pangua	1,488	21.20	6.80	56.00	2.42	45.20	23.66	104
SIERRA	CHIMBORAZO	Alausí	5,282	26.70	10.10	61.00	1.88	35.20	23.39	105
SIERRA	CANAR	Canar	14,824	27.00	9.70	77.00	54.10	22.76	106	
SIERRA	COTOPAXI	Pujilí	5,022	22.40	7.60	58.00	3.70	36.10	22.61	107
COSTA	ESMERALDAS	Muisne	4,430	14.30	6.60	69.00	2.39	67.60	22.31	108
COSTA	NAPO	Archidona	2,620	16.20	9.10	61.00	4.41	44.20	21.77	109
COSTA	M.SANTIAGO	Palora	2,241	1.60	0.00	45.00	5.18	63.20	21.74	110
COSTA	GUAYAS	Salinas	26,584	4.30	1.80	64.00	11.50	73.50	21.60	111
COSTA	SUCUMBIOS	Lago Agrio	13,596	3.10	0.20	42.00	5.97	52.60	21.35	112
COSTA	GUAYAS	Urviña Jado	7,055	2.70	0.10	45.00	2.33	61.10	21.34	113
COSTA	MANABI	24 de Mayo	5,752	16.30	0.50	77.00	2.53	72.80	20.89	114
SIERRA	LOJA	Espíndola	1,826	14.10	1.20	69.00	1.89	62.40	20.31	115
COSTA	MANABI	Paján	7,448	5.10	0.50	64.00	1.90	73.00	20.07	116

Source: Asociación de Municipalidades del Ecuador (AME), 1989; and
Instituto Nacional del Niño y la Familia, (INNFA), 1989.

1/ Nutrition estimated as the difference of 100 minus percentage of malnutrition;
malnutrition levels obtained from INNFA, INSTITUTO NACIONAL DE NIÑO Y LA FAMILIA, 1989

2/ Housing coverage corresponds to the ratio of livable housing over non-livable housing.

3/ FSBN corresponds to weighted summation: $FSBN = (A \cdot 0.3) + (B \cdot 0.2) + ((100 - C) \cdot 0.2) + (D \cdot 0.15) + (E \cdot 0.15)$

Table A2. Calculation for the Factor of Satisfaction of Basic Needs, Alternative II

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Coverage of basic needs										
Region	Province	Canton	Urban Population 1989	Water XA= 0.25	Sewage XR= 0.25	Mal- nutrition 1/ XC= 0.25	High School XD= 0.1	Housing 2/ XE= 0.15	Quality of Life Index (FSBN) 3/	FSBN Ranking II
COSTA	GALAPAGOS	San Cristobal	2,321	88.40	22.50	16.00	20.03	67.10	60.79	1
SIERRA	PICHINCHA	Rumihahui	21,732	77.00	59.10	45.00	18.66	68.30	59.89	2
COSTA	GUAYAS	Guayaquil	1,699,375	64.90	49.20	32.00	21.73	72.10	58.51	3
COSTA	PASTAZA	Mera	662	68.40	52.60	29.00	14.85	59.10	58.35	4
COSTA	EL ORO	Pasaje	34,586	74.60	45.60	32.00	11.89	66.30	58.18	5
SIERRA	TUNGURAHUA	Fanos	11,673	81.30	51.80	42.00	10.95	56.00	57.27	6
SIERRA	LOJA	Loja	103,183	78.20	51.80	42.00	17.21	55.40	57.03	7
SIERRA	CARCHI	Tulcán	40,839	71.50	55.60	38.00	14.47	55.30	57.02	8
COSTA	EL ORO	Santa Rosa	38,802	74.70	41.40	31.00	11.54	63.10	56.89	9
SIERRA	PICHINCHA	Quito	1,233,865	79.70	70.00	71.00	26.40	61.70	56.57	10
COSTA	GUAYAS	Milagro	112,089	76.90	26.30	33.00	11.93	71.60	54.48	11
COSTA	MANABI	Portoviejo	156,250	62.10	39.30	40.00	13.79	76.30	53.17	12
COSTA	EL ORO	Machala	158,798	59.40	43.90	40.00	17.62	66.40	52.55	13
SIERRA	CARCHI	Espejo	4,032	71.90	34.00	38.00	9.68	63.60	52.48	14
SIERRA	IMBABURA	Antonio Ante	15,291	82.20	34.40	54.00	9.26	61.90	50.86	15
COSTA	EL ORO	Portovelo	4,879	59.90	40.60	51.00	9.68	76.60	49.83	16
COSTA	GALAPAGOS	Santa Cruz	4,523	73.70	2.20	28.00	18.18	68.60	49.08	17
SIERRA	IMBABURA	Ibarra	72,016	76.40	41.50	60.00	12.34	55.20	48.99	18
COSTA	EL ORO	Pinas	11,566	65.60	32.20	55.00	7.11	81.40	48.62	19
SIERRA	AZUAY	Cuenca	218,490	61.10	45.10	63.00	15.98	69.80	47.87	20
COSTA	EL ORO	Zaruma	6,822	47.40	27.30	35.00	8.25	76.70	47.25	21
COSTA	MANABI	Manta	149,011	76.70	30.80	68.00	12.05	73.20	47.06	22
SIERRA	PICHINCHA	Santo Domingo	119,127	50.30	37.20	36.00	7.13	56.40	47.05	23
COSTA	ESMERALDAS	Esmeraldas	130,944	53.80	29.00	44.00	12.45	70.30	46.49	24
SIERRA	TUNGURAHUA	Ambato	133,643	52.90	42.90	53.00	13.20	61.80	46.29	25
SIERRA	CHIMBORAZO	Riobamba	98,554	69.40	44.40	69.00	15.32	55.70	46.09	26
COSTA	GALAPAGOS	Isabela	805	58.40	1.50	23.00	12.35	63.50	44.98	27
SIERRA	LOJA	Macará	14,220	63.10	23.50	50.00	7.78	64.60	44.62	28
SIERRA	PICHINCHA	Mejía	8,580	58.60	30.80	57.00	10.75	68.70	44.48	29
COSTA	LOS RIOS	Urdaneta	4,118	33.50	20.50	24.00	5.25	73.20	44.01	30
SIERRA	LOJA	Catamayo	14,321	67.70	28.90	52.00	5.74	39.80	42.69	31
COSTA	LOS RIOS	Babahoyo	60,569	45.30	22.50	47.00	9.48	72.20	41.98	32
COSTA	PASTAZA	Pastaza	15,731	44.20	30.80	41.00	9.26	49.70	41.88	33
SIERRA	CARCHI	Montúfar	14,146	54.90	29.70	54.00	6.34	55.00	41.53	34
COSTA	Z.CHINCHIPE	Yantzaza	4,758	45.60	15.30	34.00	4.83	55.70	40.56	35
COSTA	Z.CHINCHIPE	Zamora		49.80	25.90	46.00	7.56	49.00	40.53	36
COSTA	EL ORO	Huaquillas	32,577	49.50	1.80	34.00	7.67	69.40	40.50	37
COSTA	GUAYAS	Naranjal	14,684	39.20	8.70	32.00	3.71	72.20	40.18	38
COSTA	EL ORO	Arenillas	13,029	46.40	15.70	45.00	8.07	63.50	39.61	39
COSTA	GUAYAS	Naranjito	14,770	49.60	18.80	50.00	5.46	61.90	39.43	40
COSTA	GUAYAS	Yaguachi	10,088	36.70	10.70	32.00	5.43	65.60	39.23	41
SIERRA	TUNGURAHUA	Santiago de Pil	5,272	53.10	13.60	52.00	5.86	65.40	39.07	42
COSTA	LOS RIOS	Quevedo	101,155	37.70	15.60	40.00	7.15	65.90	38.93	43
SIERRA	CANAR	Biblián	4,370	42.30	13.00	46.00	3.88	72.70	38.62	44
COSTA	M.SANTIAGO	Gualaquiza	4,228	29.90	15.30	27.00	4.58	57.30	38.60	45
COSTA	EL ORO	El Guabo	10,669	49.80	11.50	49.00	6.24	65.90	38.58	46
SIERRA	CARCHI	Mira	2,909	53.50	17.50	55.00	4.63	59.40	38.37	47
SIERRA	PICHINCHA	Pedro Moncayo	2,125	64.40	15.30	64.00	3.73	60.30	38.34	48
SIERRA	PICHINCHA	Cayambe	18,663	41.50	24.50	48.00	6.54	52.70	38.06	49
COSTA	M.SANTIAGO	Santiago	1,701	33.60	16.70	39.00	6.25	63.40	37.96	50
SIERRA	LOJA	Calvas	13,046	34.70	21.30	44.00	7.19	60.60	37.81	51
SIERRA	COTOPAXI	Latacunga	38,482	41.20	21.40	47.00	8.56	52.80	37.68	52
COSTA	GUAYAS	Samborondón	9,703	29.70	6.60	32.00	5.17	70.90	37.23	53
COSTA	LOS RIOS	Puebloviejo	5,563	31.10	7.40	42.00	4.21	77.60	36.19	54
SIERRA	IMBABURA	Otavalo	23,494	51.80	26.50	64.00	7.62	44.80	36.06	55
COSTA	M.SANTIAGO	Limón Indanza	3,250	38.20	12.90	50.00	4.02	66.00	35.58	56
SIERRA	TUNGURAHUA	San Pedro de Pe	5,857	54.00	12.20	64.00	4.31	63.00	35.43	57
SIERRA	CANAR	Azogues	19,317	36.70	17.20	60.00	8.25	74.20	35.43	58
SIERRA	LOJA	Puyango	4,041	24.30	11.80	44.00	3.48	61.90	35.16	59
COSTA	NAPO	Quijos	442	34.30	14.90	49.00	5.18	60.70	34.67	60
SIERRA	BOLIVAR	Chimbo	3,685	34.00	10.70	48.00	6.17	63.30	34.29	61
COSTA	MANABI	Rocafuerte	8,095	36.40	1.70	44.00	5.25	67.60	34.19	62
SIERRA	BOLIVAR	San Miguel	5,025	39.80	17.30	63.00	7.83	65.80	34.18	63
SIERRA	LOJA	Celica	4,342	38.40	14.60	54.00	4.22	59.50	34.10	64
COSTA	LOS RIOS	Ventanas	25,382	25.00	10.00	46.00	4.52	74.20	33.83	65
SIERRA	CHIMBORAZO	Guano	7,522	66.10	11.00	78.00	3.21	56.90	33.63	66
SIERRA	BOLIVAR	Guaranda	16,829	33.30	20.60	53.00	6.49	51.50	33.60	67
SIERRA	TUNGURAHUA	Quero	1,670	35.10	9.50	42.00	2.47	51.20	33.58	68
COSTA	MANABI	Chone	48,557	29.50	10.30	51.00	5.82	70.70	33.39	69
SIERRA	LOJA	Paltas	6,447	36.80	9.50	47.00	4.08	53.60	33.27	70

Table A2. Calculation for the Factor of Satisfaction of Basic Needs, Alternative II

Region	Province	Canton	Coverage of basic needs					Quality of Life Index (FSBN) 3/	FSBN Ranking II	
			Urban Population 1989	Water XA= 0.25	Sewage XB= 0.25	Mal-nutrition 1/ XC= 0.25	High School Housing 2/ XD= 0.1 XE= 0.15			
COSTA	MANABI	Sucre	15,030	26.80	0.00	38.00	4.48	70.60	33.24	71
COSTA	M.SANTIAGO	Sucua	5,866	37.20	1.30	45.00	5.42	61.40	33.13	72
COSTA	GUAYAS	El Empalme	26,178	16.30	2.10	32.00	3.61	74.10	33.08	73
COSTA	M.SANTIAGO	Morona	8,365	31.90	17.40	45.00	5.33	41.90	32.89	74
SIERRA	TUNGURAHUA	Patate	2,377	44.20	13.90	69.00	5.30	64.70	32.51	75
SIERRA	CHIMBORAZO	Chunchi	3,895	44.20	20.60	66.00	3.73	47.50	32.20	76
SIERRA	IMBABURA	Cotacachi	6,144	37.20	16.10	54.00	4.34	43.20	31.74	77
COSTA	SUCUMBOS	Putumayo	1,336	0.00	0.00		7.03	37.80	31.37	78
SIERRA	LOJA	Sozoranga	875	24.60	2.30	42.00	2.95	62.50	30.90	79
COSTA	Z.CHINCHIPE	Chinchipe	3,021	46.30	7.50	64.00	4.78	52.80	30.85	80
SIERRA	AZUAY	Gualaceo	9,124	34.40	11.10	64.00	3.19	66.70	30.70	81
COSTA	ESMERALDAS	San Lorenzo	15,281	32.20	6.90	41.00	4.00	37.20	30.51	82
COSTA	MANABI	Bolivar	12,747	20.70	7.50	50.00	3.55	68.80	30.22	83
COSTA	LOS RIOS	Vinces	20,739	20.20	11.60	55.00	4.30	70.10	30.15	84
SIERRA	LOJA	Saraguro	2,561	34.00	5.80	58.00	2.80	58.50	29.50	85
COSTA	MANABI	Santa Ana	7,572	19.40	1.40	48.00	2.91	72.60	29.38	86
SIERRA	LOJA	Gonzanamá	1,887	33.90	6.70	57.00	3.60	53.60	29.30	87
COSTA	SUCUMBOS	Sucumbios	272	19.90	6.00	42.00	4.30	51.40	29.12	88
COSTA	NAPO	Tena	8,127	30.10	17.50	66.00	7.21	50.60	28.71	89
COSTA	GUAYAS	Balzar	26,074	29.30	12.90	70.00	3.20	65.10	28.13	90
SIERRA	AZUAY	Girón	3,296	27.60	8.70	66.00	2.62	66.50	27.81	91
SIERRA	IMBABURA	Pimampiro	5,277	47.20	17.60	81.00	2.59	43.60	27.75	92
SIERRA	LOJA	Zapotillo	1,168	15.40	0.00	48.00	2.82	67.80	27.55	93
SIERRA	BOLIVAR	Chillanes	2,865	18.40	13.60	59.00	3.31	59.10	27.45	94
SIERRA	COTOPAXI	Salcedo	7,824	26.00	12.70	60.00	5.12	47.90	27.37	95
SIERRA	AZUAY	Santa Isabel	2,718	26.60	5.00	48.00	2.29	41.10	27.29	96
COSTA	GUAYAS	Daule	27,141	4.20	0.40	38.00	3.64	63.70	26.57	97
SIERRA	AZUAY	Paute	2,947	28.00	6.60	71.00	3.01	68.70	26.51	98
COSTA	MANABI	Montecristi	10,634	37.40	4.60	83.00	4.48	73.00	26.15	99
COSTA	ESMERALDAS	Eloy Alfaro	4,582	13.00	1.90	45.00	2.60	55.50	26.06	100
COSTA	MANABI	Junín	4,543	26.70	3.60	72.00	4.85	68.20	25.29	101
SIERRA	COTOPAXI	Pangua	1,488	21.20	6.80	56.00	2.42	45.20	25.02	102
SIERRA	CHIMBORAZO	Alausí	5,282	26.70	10.10	61.00	1.88	35.20	24.42	107
SIERRA	AZUAY	Sigsig	4,170	21.50	8.40	73.00	1.99	65.90	24.31	108
SIERRA	COTOPAXI	Saquisilí	3,460	38.40	9.70	75.00	5.16	36.20	24.22	109
COSTA	M.SANTIAGO	Palora	2,241	1.60	0.00	45.00	5.18	63.20	24.15	110
COSTA	SUCUMBOS	Lago Agrio	13,596	3.10	0.20	42.00	5.97	52.60	23.81	111
SIERRA	COTOPAXI	Pujilí	5,022	22.40	7.60	58.00	3.70	36.10	23.79	112
COSTA	ESMERALDAS	Huisne	4,430	14.30	6.60	69.00	2.39	67.60	23.35	113
COSTA	NAPO	Archidona	2,620	16.20	9.10	61.00	4.41	44.20	23.15	114
SIERRA	CANAR	Canar	14,824	27.00	9.70	77.00		54.10	23.04	115
COSTA	GUAYAS	Salinas	26,584	4.30	1.80	64.00	11.50	73.50	22.70	116

Source: Asociación de Municipalidades del Ecuador (AME), 1989; and Instituto Nacional del Niño y la Familia, (INNFA), 1989.

- 1/ Nutrition estimated as the difference of 100 minus percentage of malnutrition; malnutrition levels obtained from INNFA, INSTITUTO NACIONAL DE NIÑO Y LA FAMILIA, 1989
- 2/ Housing coverage corresponds to the ratio of livable housing over non-livable housing.
- 3/ FSBN corresponds to weighted summation: $FSBN=(A*0.25)+(B*0.25)+((100-C)*0.25)+(D*0.10)+(E*0.15)$

Table A3. Calculation for the Factor of Satisfaction of Basic Needs, Alternative III

Region	Province	Canton	Coverage of basic needs					Quality of Life Index (FSBN) 3/	FSBN Ranking III	
			Urban Population 1989	Water XA= 0.3	Sewage XB= 0.3	Mal-nutrition XC= 0.15	High School XD= 0.1			Housing 2/ XE= 0.15
SIERRA	PICHINCHA	Ruminahui	21,732	77.00	59.10	45.00	18.66	68.30	61.19	1
SIERRA	PICHINCHA	Quito	1,233,865	79.70	70.00	71.00	26.40	61.70	61.15	2
SIERRA	TUNGURAHUA	Banos	11,673	81.30	51.80	42.00	10.95	56.00	58.12	3
COSTA	GALAPAGOS	San Cristobal	2,321	88.40	22.50	16.00	20.03	67.10	57.94	4
SIERRA	LOJA	Loja	103,183	78.20	51.80	42.00	17.21	55.40	57.73	5
COSTA	GUAYAS	Guayaquil	1,699,375	64.90	49.20	32.00	21.73	72.10	57.42	6
COSTA	EL ORO	Pasaje	34,586	74.60	45.60	32.00	11.89	66.30	57.39	7
COSTA	PASTAZA	Mera	662	68.40	52.60	29.00	14.85	59.10	57.30	8
SIERRA	CARCHI	Tulcan	40,839	71.50	55.60	38.00	14.47	55.30	57.17	9
COSTA	EL ORO	Santa Rosa	38,802	74.70	41.40	31.00	11.54	63.10	55.80	10
COSTA	GUAYAS	Milagro	112,089	76.90	26.30	33.00	11.93	71.60	52.94	11
COSTA	MANABI	Portoviejo	156,250	62.10	39.30	40.00	13.79	76.30	52.24	12
SIERRA	IMBABURA	Antonio Ante	15,291	82.20	34.40	54.00	9.26	61.90	52.09	13
COSTA	EL ORO	Machala	158,798	59.40	43.90	40.00	17.62	66.40	51.71	14
SIERRA	CARCHI	Espejo	4,092	71.90	34.00	38.00	9.68	63.60	51.58	15
SIERRA	IMBABURA	Ibarra	72,016	76.40	41.50	60.00	12.34	55.20	50.88	16
COSTA	EL ORO	Portovelo	4,879	59.90	40.60	51.00	9.68	76.60	49.96	17
SIERRA	AZUAY	Cuenca	218,490	61.10	45.10	63.00	15.98	69.80	49.48	18
COSTA	MANABI	Manta	149,011	76.70	30.80	68.00	12.05	73.20	49.24	19
COSTA	EL ORO	Pinas	11,566	65.60	32.20	55.00	7.11	81.40	49.01	20
SIERRA	CHIMBORAZO	Riobamba	98,554	69.40	44.40	69.00	15.32	55.70	48.68	21
SIERRA	TUNGURAHUA	Ambato	133,643	52.90	42.90	53.00	13.20	61.80	46.38	22
COSTA	GALAPAGOS	Santa Cruz	4,523	73.70	2.20	28.00	18.18	68.60	45.68	23
COSTA	ESMERALDAS	Esmeraldas	130,944	53.80	29.00	44.00	12.45	70.30	45.03	24
SIERRA	PICHINCHA	Santo Domingo	119,127	50.30	37.20	36.00	7.13	56.40	45.02	25
SIERRA	PICHINCHA	Mejia	8,580	58.60	30.80	57.00	10.75	68.70	44.65	26
COSTA	EL ORO	Zaruma	6,822	47.40	27.30	35.00	8.25	76.70	44.49	27
SIERRA	LOJA	Macará	14,220	63.10	23.50	50.00	7.78	64.60	43.95	28
SIERRA	LOJA	Catamayo	14,321	67.70	28.90	52.00	5.74	39.80	42.72	29
SIERRA	CARCHI	Montúfar	14,146	54.90	29.70	54.00	6.34	55.00	41.16	30
COSTA	GALAPAGOS	Isabela	805	58.40	1.50	23.00	12.35	63.50	40.28	31
COSTA	LOS RIOS	Babahoyo	60,569	45.30	22.50	47.00	9.48	72.20	40.07	32
COSTA	PASTAZA	Pastaza	15,731	44.20	30.80	41.00	9.26	49.70	39.73	33
COSTA	LOS RIOS	Urdaneta	4,118	33.50	20.50	24.00	5.25	73.20	39.11	34
COSTA	Z.CHINCHIPE	Zamora		49.80	25.90	46.00	7.56	49.00	38.92	35
SIERRA	PICHINCHA	Pedro Moncayo	2,125	64.40	15.30	64.00	3.73	60.30	38.73	36
COSTA	GUAYAS	Naranjito	14,770	49.60	18.80	50.00	5.46	61.90	37.85	37
SIERRA	TUNGURAHUA	Santiago de Pil	5,272	53.10	13.60	52.00	5.86	65.40	37.61	38
SIERRA	CARCHI	Mira	2,909	53.50	17.50	55.00	4.63	59.40	37.42	39
COSTA	EL ORO	Arenillas	13,029	46.40	15.70	45.00	8.07	63.50	37.21	40
COSTA	Z.CHINCHIPE	Yantzaza	4,758	45.60	15.30	34.00	4.83	55.70	37.01	41
COSTA	EL ORO	El Guabo	10,669	49.80	11.50	49.00	6.24	65.90	36.55	42
COSTA	EL ORO	Huaquillas	32,577	49.50	1.80	34.00	7.67	69.40	36.47	43
SIERRA	IMBABURA	Otavaló	23,494	51.80	26.50	64.00	7.62	44.80	36.37	44
SIERRA	PICHINCHA	Cayambe	18,663	41.50	24.50	48.00	6.54	52.70	36.16	45
SIERRA	CANAR	Biblián	4,370	42.30	13.00	46.00	3.88	72.70	35.98	46
COSTA	GUAYAS	Naranjal	14,684	39.20	8.70	32.00	3.71	72.20	35.77	47
COSTA	LOS RIOS	Quevedo	101,155	37.70	15.60	40.00	7.15	65.90	35.59	48
SIERRA	COTOPAXI	Latacunga	38,482	41.20	21.40	47.00	8.56	52.80	35.51	49
SIERRA	CHIMBORAZO	Guano	7,522	66.10	11.00	78.00	3.21	56.90	35.29	50
SIERRA	TUNGURAHUA	San Pedro de Pe	5,857	54.00	12.20	64.00	4.31	63.00	35.14	51
SIERRA	LOJA	Calvas	13,046	34.70	21.30	44.00	7.19	60.60	35.01	52
COSTA	GUAYAS	Yaguachi	10,088	36.70	10.70	32.00	5.43	65.60	34.80	53
COSTA	M.SANTIAGO	Santiago	1,701	33.60	16.70	39.00	6.25	63.40	34.38	54
SIERRA	CANAR	Azogues	19,317	36.70	17.20	60.00	8.25	74.20	34.12	55
COSTA	M.SANTIAGO	Gualaquiza	4,228	29.90	15.30	27.00	4.58	57.30	33.56	56
SIERRA	BOLIVAR	San Miguel	5,025	39.80	17.30	63.00	7.83	65.80	33.33	57
COSTA	M.SANTIAGO	Limón Indanza	3,250	38.20	12.90	50.00	4.02	66.00	33.13	58
SIERRA	TUNGURAHUA	Patate	2,377	44.20	13.90	69.00	5.30	64.70	32.32	59
COSTA	LOS RIOS	Puebloviejo	5,563	31.10	7.40	42.00	4.21	77.60	32.31	60
COSTA	GUAYAS	Samborondón	9,703	29.70	6.60	32.00	5.17	70.90	32.24	61
SIERRA	LOJA	Celica	4,342	38.40	14.60	54.00	4.22	59.50	32.15	62
SIERRA	CHIMBORAZO	Chunchi	3,895	44.20	20.60	66.00	3.73	47.50	32.04	63
COSTA	NAPO	Quijos	442	34.30	14.90	49.00	5.18	60.70	32.03	64
SIERRA	LOJA	Puyango	4,041	34.30	11.80	44.00	3.48	61.00	31.86	65
SIERRA	BOLIVAR	Guaranda	16,829	33.30	20.60	53.00	6.49	51.50	31.59	66
SIERRA	BOLIVAR	Chimbo	3,685	34.00	10.70	48.00	6.17	63.30	31.32	67
COSTA	MANABI	Rocafuerte	8,095	36.40	1.70	44.00	5.25	67.60	30.49	68
COSTA	MANABI	Chone	48,557	29.50	10.30	51.00	5.82	70.70	30.48	69
SIERRA	LOJA	Paltas	6,447	36.80	9.50	47.00	4.08	53.60	30.29	70

Table A3. Calculation for the Factor of Satisfaction of Basic Needs, Alternative III

Region	Province	Canton	Urban Population 1989	Coverage of basic needs					Quality of Life Index (FSBN) 3/	FSBN Ranking III
				Water XA= 0.3	Sewage XB= 0.3	Mal- nutrition 1/ XC= 0.15	High School XD= 0.1	Housing 2/ XE= 0.15		
COSTA	LOS RIOS	Ventanas	25,382	25.00	10.00	46.00	4.52	74.20	30.18	71
SIERRA	TUNGURAHUA	Guero	1,670	35.10	9.50	42.00	2.47	51.20	30.01	72
COSTA	Z.CHINCHIPE	Chinchipe	3,021	46.30	7.50	64.00	4.78	52.80	29.94	73
COSTA	M.SANTIAGO	Morona	8,365	31.90	17.40	45.00	5.33	41.90	29.86	74
SIERRA	IMBABURA	Cotacachi	6,144	37.20	16.10	54.00	4.34	43.20	29.80	75
COSTA	M.SANTIAGO	Sucua	5,866	37.20	1.30	45.00	5.42	61.40	29.55	76
SIERRA	AZUAY	Guilaceo	9,124	34.40	11.10	64.00	3.19	66.70	29.37	77
SIERRA	IMBABURA	Pimampiro	5,277	47.20	17.60	81.00	2.59	43.60	29.09	78
COSTA	MANABI	Sucra	15,030	26.80	0.00	38.00	4.48	70.60	28.38	79
COSTA	NAPO	Tena	8,127	30.10	17.50	66.00	7.21	50.60	27.69	80
SIERRA	LOJA	Saraguro	2,561	34.00	5.80	58.00	2.80	58.50	27.29	81
COSTA	GUAYAS	Balzar	26,074	29.30	12.90	70.00	3.20	65.10	27.24	82
COSTA	LOS RIOS	Vinces	20,739	20.20	11.60	55.00	4.30	70.10	27.24	83
COSTA	GUAYAS	El Empalme	26,178	16.30	2.10	32.00	3.61	74.10	27.20	84
SIERRA	LOJA	Gonzanamá	1,887	33.90	6.70	57.00	3.60	53.60	27.03	85
COSTA	MANABI	Bolivar	12,747	20.70	7.50	50.00	3.55	68.80	26.63	86
COSTA	ESMERALDAS	San Lorenzo	15,281	32.20	6.90	41.00	4.00	37.20	26.56	87
COSTA	MANABI	Montecristi	10,634	37.40	4.60	83.00	4.48	73.00	26.55	88
SIERRA	LOJA	Sozoranga	875	24.60	2.30	42.00	2.95	62.50	26.44	89
SIERRA	AZUAY	Girón	3,296	27.60	8.70	66.00	2.62	66.50	26.23	90
SIERRA	AZUAY	Paute	2,947	28.00	6.60	71.00	3.01	68.70	25.34	91
SIERRA	COTOPAXI	Salcedo	7,824	26.00	12.70	60.00	5.12	47.90	25.31	92
COSTA	MANABI	Santa Ana	7,572	19.40	1.40	48.00	2.91	72.60	25.22	93
SIERRA	BOLIVAR	Chillanes	2,865	18.40	13.60	59.00	3.31	59.10	24.95	94
COSTA	SUCUMBIOS	Sucumbios	772	19.90	6.00	42.00	4.30	51.40	24.61	95
SIERRA	COTOPAXI	Saquisilí	3,460	38.40	9.70	75.00	5.16	36.20	24.13	96
COSTA	MANABI	Junín	4,543	26.70	3.60	72.00	4.85	68.20	24.00	97
SIERRA	AZUAY	Santa Isabel	2,713	26.60	5.00	48.00	2.29	41.10	23.67	98
SIERRA	LOJA	Zapotillo	1,168	16.40	0.00	48.00	2.82	67.80	23.17	99
SIERRA	AZUAY	Sigsig	4,170	21.50	8.40	73.00	1.99	65.90	23.10	100
SIERRA	CANAR	Canar	14,824	27.00	9.70	77.00		54.10	22.58	101
SIERRA	CHIMBORAZO	Alausí	5,282	26.70	10.10	61.00	1.88	35.20	22.36	102
SIERRA	COTOPAXI	Pangua	1,488	21.20	6.80	56.00	2.42	45.20	22.02	103
COSTA	SUCUMBIOS	Putumayo	1,336	0.00	0.00		7.03	37.80	21.37	104
COSTA	ESMERALDAS	Eloy Alfaro	4,582	13.00	1.90	45.00	2.60	55.50	21.31	105
COSTA	ESMERALDAS	Muisne	4,430	14.30	0.60	69.00	2.39	67.60	21.30	106
SIERRA	COTOPAXI	Pujilí	5,022	22.40	7.60	58.00	3.70	36.10	21.09	107
COSTA	GUAYAS	Daule	27,141	4.20	0.40	38.00	3.64	63.70	20.60	108
COSTA	NAPO	Archidona	2,620	16.20	9.10	61.00	4.41	44.20	20.51	109
COSTA	MANABI	24 de Mayo	5,752	16.30	0.50	77.00	2.53	72.80	19.66	110
COSTA	GUAYAS	Snlinas	26,584	4.30	1.80	64.00	11.50	33.50	19.41	111
SIERRA	LOJA	Espíndola	1,826	14.10	1.20	69.00	1.89	62.40	18.79	112
COSTA	M.SANTIAGO	Palora	2,241	1.60	0.00	45.00	5.18	63.20	18.73	113
COSTA	GUAYAS	Urvina Jado	7,055	2.70	0.10	45.00	2.33	61.10	18.49	114
COSTA	MANABI	Paján	7,448	5.10	0.50	64.00	1.90	73.00	18.22	115
COSTA	SUCUMBIOS	Lago Agrio	13,596	3.10	0.20	42.00	5.97	52.60	18.18	116

Source: Asocion de Municipalidades del Ecuador (AME), 1989; and Instituto Nacional del Niño y la Familia, (INNFA), 1989.

Nutrition estimated as the difference of 100 minus percentage of malnutrition; malnutrition levels obtained from INNFA, INSTITUTO NACIONAL DE NIÑO Y LA FAMILIA, 1989

Housing coverage corresponds to the ratio of livable housing over non-livable housing.

FSBN corresponds to weighted summation: $FSBN=(A*0.3)+(B*0.3)+((100-C)*0.15)+(D*0.10)+(E*0.15)$

Table A4. Sensitivity of the FSNB using different weights

Region	Province	Canton	Urban Population 1989	FSNB 1/ Ranking I	FSNB 2/ Ranking II	FSNB 3/ Ranking III
Water weights				0.30	0.25	0.30
Sewage weights				0.20	0.25	0.30
Nutrition weights				0.20	0.25	0.15
High school weights				0.15	0.10	0.10
Housing weights				0.15	0.15	0.15
COSTA	GALAPAGOS	San Cristobal	2,321	1	1	4
SIERRA	PICHINCHA	Ruminahui	21,732	2	2	1
COSTA	GUAYAS	Guayaquil	1,699,375	3	3	6
SIERRA	PICHINCHA	Quito	1,233,865	4	10	2
COSTA	EL ORO	Pasaje	34,586	5	5	7
SIERRA	TUNGURAHUA	Banos	11,673	6	6	3
COSTA	PASTAZA	Mera	662	7	4	8
SIERRA	LOJA	Loja	103,183	8	7	5
COSTA	EL ORO	Santa Rosa	38,802	9	9	10
SIERRA	CARCHI	Tulcán	40,839	10	8	9
COSTA	GUAYAS	Milagro	112,089	11	11	11
COSTA	MANABI	Portoviejo	156,250	12	12	12
SIERRA	CARCHI	Espejo	4,092	13	14	15
SIERRA	IMBABURA	Antonio Ante	15,291	14	15	13
COSTA	EL ORO	Machala	158,798	15	13	14
COSTA	GALAPAGOS	Santa Cruz	4,523	16	17	23
SIERRA	IMBABURA	Ibarra	72,016	17	18	16
COSTA	EL ORO	Portovelo	4,879	18	16	17
COSTA	EL ORO	Pinas	11,566	19	19	20
COSTA	MANABI	Manta	149,011	20	22	19
SIERRA	AZUAY	Cuenca	218,490	21	20	18
SIERRA	CHIMBORAZO	Riobamba	98,554	22	26	21
COSTA	ESMERALDAS	Esmeraldas	130,944	23	24	24
COSTA	EL ORO	Zaruma	6,822	24	21	27
SIERRA	TUNGURAHUA	Ambato	133,643	25	25	22
SIERRA	PICHINCHA	Santo Domingo	119,127	26	23	25
COSTA	GALAPAGOS	Isabela	805	27	27	31
SIERRA	LOJA	Macará	14,220	28	28	28
SIERRA	PICHINCHA	Mejía	8,580	29	29	26
SIERRA	LOJA	Catamayo	14,321	30	31	29
COSTA	LOS RIOS	Urdaneta	4,118	31	30	34
COSTA	LOS RIOS	Babahoyo	60,569	32	32	32
SIERRA	CARCHI	Montúfar	14,146	33	34	30
COSTA	PASTAZA	Pastaza	15,731	34	33	33
COSTA	EL ORO	Huaquillas	32,577	35	37	43
SIERRA	TUNGURAHUA	Mocha		36	36	117
SIERRA	PICHINCHA	Pedro Moncayo	2,125	37	48	36
COSTA	Z.CHINCHIPE	Yantzaza	4,758	38	35	41
SIERRA	TUNGURAHUA	Santiago de Pil	5,272	39	42	38
COSTA	EL ORO	Arenillas	13,029	40	39	40
COSTA	GUAYAS	Naranjito	14,770	41	40	37
COSTA	GUAYAS	Naranjal	14,684	42	38	47
COSTA	EL ORO	El Guabo	10,669	43	44	42
SIERRA	CARCHI	Mira	2,909	44	47	39
SIERRA	CANAR	Biblián	4,370	45	44	46
COSTA	GUAYAS	Yaguachi	10,088	46	41	53
COSTA	LOS RIOS	Quevedo	101,155	47	43	48
SIERRA	PICHINCHA	Cayambe	18,663	48	49	45
SIERRA	COTOPAXI	Latacunga	38,482	49	52	49
COSTA	M.SANTIAGO	Santiago	1,701	50	50	54
SIERRA	LOJA	Calvas	13,046	51	51	52
SIERRA	TUNGURAHUA	San Pedro de Pe	5,857	52	57	51
COSTA	M.SANTIAGO	Gualaquiza	4,228	53	45	56
SIERRA	IMBABURA	Otavalo	23,494	54	55	44
SIERRA	CHIMBORAZO	Guano	7,522	55	66	50
COSTA	GUAYAS	Samborondón	9,703	56	53	61
SIERRA	CANAR	Azogues	19,317	57	58	55
COSTA	LOS RIOS	Puebloviejo	5,563	58	54	60
COSTA	M.SANTIAGO	Limón Indanza	3,250	59	56	58
SIERRA	BOLIVAR	San Miguel	5,025	60	63	57
SIERRA	LOJA	Puyango	4,041	61	59	65
COSTA	MANABI	Rocafuerte	8,095	62	62	68
COSTA	NAPO	Quijos	442	63	60	64
SIERRA	LOJA	Celica	4,342	64	64	62

Table A4. Sensitivity of the FSNB using different weights

Region	Province	Canton	Urban Population 1989	FSNB 1/ Ranking I	FSNB 2/ Ranking II	FSNB 3/ Ranking III
Water weights				0.30	0.25	0.30
Sewage weights				0.20	0.25	0.30
Nutrition weights				0.20	0.25	0.15
High school weights				0.15	0.10	0.10
Housing weights				0.15	0.15	0.15
SIERRA	BOLIVAR	Chimbo	3,685	65	61	67
SIERRA	TUNGURAHUA	Patate	2,377	66	75	59
COSTA	M.SANTIAGO	Sucua	5,866	67	72	76
SIERPA	BOLIVAR	Guaranda	16,829	68	67	66
SIERRA	LOJA	Paltas	6,447	69	70	70
COSTA	MANABI	Chone	48,557	70	69	69
COSTA	LOS RIOS	Ventanas	25,382	71	65	71
SIERRA	TUNGURAHUA	Quero	1,670	72	68	72
SIERRA	CHIMBORAZO	Chunchi	3,895	73	76	53
COSTA	MANABI	Sucre	15,030	74	71	79
COSTA	Z.CHINCHIPE	Chinchipe	3,021	75	80	73
COSTA	M.SANTIAGO	Morona	8,365	76	74	74
SIERRA	IMBABURA	Cotacachi	6,144	77	77	75
COSTA	GUAYAS	El Empalme	26,178	78	73	84
SIERRA	AZUAY	Gualaceo	9,124	79	81	77
SIERRA	LOJA	Sozoranga	875	80	79	89
COSTA	ESMERALDAS	San Lorenzo	15,281	81	82	87
SIERRA	LOJA	Saraguro	2,561	82	85	81
SIERRA	LOJA	Gonzanamá	1,887	83	87	85
COSTA	MANABI	Bolívar	12,747	84	83	86
COSTA	LOS RIOS	Vinces	20,739	85	84	83
SIERRA	IMBABURA	Pimampiro	5,277	86	92	78
COSTA	NAPO	Tena	8,127	87	89	80
COSTA	MANABI	Santa Ana	7,572	88	86	93
COSTA	GUAYAS	Balzar	26,074	89	90	82
SIERRA	AZUAY	Girón	3,296	90	91	90
COSTA	MANABI	Montecristi	10,634	91	99	88
COSTA	SUCUMBIOS	Sucumbios	272	92	88	95
COSTA	SUCUMBIOS	Putumayo	1,336	93	78	104
SIERRA	COTOPAXI	Salcedo	7,824	94	95	92
SIERRA	AZUAY	Paute	2,947	95	98	91
SIERRA	LOJA	Zapotillo	1,168	96	93	99
SIERRA	AZUAY	Santa Isabel	2,718	97	96	98
SIERRA	BOLIVAR	Chillanes	2,865	98	94	94
COSTA	MANABI	Junín	4,543	99	101	97
SIERRA	COTOPAXI	Saquisilí	3,460	100	109	96
COSTA	ESMERALDAS	Eloy Alfaro	4,582	101	100	105
COSTA	GUAYAS	Daule	27,141	102	97	108
SIERRA	AZUAY	Sigsig	4,170	103	108	100
SIERRA	COTOPAXI	Pangua	1,488	104	102	103
SIERRA	CHIMBORAZO	Alausi	5,282	105	107	102
SIERRA	CANAR	Canar	14,824	106	116	101
SIERRA	COTOPAXI	Pujilí	5,022	107	113	107
COSTA	ESMERALDAS	Muisne	4,430	108	114	106
COSTA	NAPO	Archidona	2,620	109	115	109
COSTA	M.SANTIAGO	Palora	2,241	110	110	113
COSTA	GUAYAS	Salinas	26,584	111	117	111
COSTA	SUCUMBIOS	Lago Agrio	13,596	112	112	116
COSTA	GUAYAS	Urvina Jado	7,055	113	111	114
COSTA	MANABI	24 de Mayo	5,752	114	121	110
SIERRA	LOJA	Espíndola	1,826	115	120	112
COSTA	MANABI	Paján	7,448	116	118	115

1/ From Table A1, FSNB weighted summation: $FSNB=(A*0.3)+(B*0.2)+((100-C)*0.2)+(D*0.15)+(E*0.15)$

2/ From Table A2, FSNB weighted summation: $FSNB=(A*0.25)+(B*0.25)+((100-C)*0.25)+(D*0.10)+(E*0.15)$

3/ From Table A3, FSNB weighted summation: $FSNB=(A*0.3)+(B*0.3)+((100-C)*0.15)+(D*0.10)+(E*0.15)$

Table A5. Factor of Satisfaction of Basic Needs, Average per Groups of Cities

Region	Province	Canton	Urban Population 1989	Quality of Life Index (FSNB) 1/	Average FSNB Seven groups of cities	Average FSNB Three Major Categories of Cities
COSTA	GUAYAS	Guayaquil	1,699,375	56.98		A Metropolitan cities
SIERRA	PICHINCHA	Quito	1,233,865	56.92	56.95	56.95
SIERRA	AZUAY	Cuenca	218,490	47.62	48.27	B Secondary cities
COSTA	EL ORO	Machala	158,798	51.20		42.99
COSTA	MANABI	Portoviejo	156,250	52.00		
COSTA	MANABI	Manta	149,011	48.36		
SIERRA	TUNGURAHUA	Ambato	133,643	45.10		
COSTA	ESMERALDAS	Esmeraldas	130,944	45.55		
SIERRA	PICHINCHA	Santo Domingo	119,127	44.86		
COSTA	GUAYAS	Milagro	112,089	54.26		
SIERRA	LOJA	Loja	103,483	56.31		
COSTA	LOS RIOS	Quevedo	101,155	37.39		
SIERRA	CHIMBORAZO	Riobamba	98,554	46.55	C	
SIERRA	IMBABURA	Ibarra	72,016	49.35	45.62	
COSTA	LOS RIOS	Babahoyo	60,569	40.94		
COSTA	MANABI	Chone	48,557	32.19	D	
SIERRA	CARCHI	Tulcán	40,839	55.43	37.48	
COSTA	EL ORO	Santa Rosa	38,802	55.69		
SIERRA	COTOPAXI	Latacunga	38,482	36.44		
COSTA	EL ORO	Pasaje	34,586	56.83		
COSTA	EL ORO	Huaquillas	32,577	39.97		
COSTA	GUAYAS	Daule	27,141	23.84		
COSTA	GUAYAS	Salinas	26,584	21.60		
COSTA	GUAYAS	El Empalme	26,178	30.57		
COSTA	GUAYAS	Balzar	26,074	27.61		
COSTA	LOS RIOS	Ventanas	25,382	32.11		
SIERRA	IMBABURA	Otavalo	23,494	35.90	E	Tertiary cities
SIERRA	PICHINCHA	Ruminahui	21,732	58.96	37.58	33.78
COSTA	LOS RIOS	Vinces	20,739	28.54		
SIERRA	CANAR	Azogues	19,317	34.82		
SIERRA	PICHINCHA	Cayambe	18,663	36.64		
SIERRA	BOLIVAR	Guaranda	16,829	32.21		
COSTA	PASTAZA	Pastaza	15,731	40.06		
SIERRA	IMBABURA	Antonio Ante	15,291	51.41		
COSTA	ESMERALDAS	San Lorenzo	15,281	29.02		
COSTA	MANABI	Sucra	15,030	31.70		
SIERRA	CANAR	Canar	14,824	22.76		
COSTA	GUAYAS	Naranjito	14,770	38.74		
COSTA	GUAYAS	Naranjal	14,684	38.49		
SIERRA	LOJA	Catamayo	14,321	42.52		
SIERRA	LOJA	Macará	14,220	44.49		
SIERRA	CARCHI	Montáfar	14,146	40.81		
COSTA	SUCUMBIOS	Lago Agrio	13,596	21.35		
SIERRA	LOJA	Calvas	13,046	36.04		
COSTA	EL ORO	Arenillas	13,029	38.80		
COSTA	MANABI	Bolívar	12,747	28.56		
SIERRA	TUNGURAHUA	Baños	11,673	56.39		
COSTA	EL ORO	Pinas	11,566	48.40		
COSTA	EL ORO	El Guabo	10,669	38.26		
COSTA	MANABI	Montecristi	10,634	27.16		
COSTA	GUAYAS	Yaguachi	10,088	37.40		
COSTA	GUAYAS	Samborondón	9,703	35.24	F	
SIERRA	AZUAY	Gualaceo	9,124	30.22	30.99	
SIERRA	PICHINCHA	Mejía	8,580	44.26		
COSTA	M.SANTIAGO	Morona	8,365	31.13		
COSTA	NAPO	Tena	8,127	28.00		
COSTA	MANABI	Rocafuerte	8,095	33.39		
SIERRA	COTOPAXI	Salcedo	7,824	26.29		
COSTA	MANABI	Santa Ana	7,572	27.83		
SIERRA	CHIMBORAZO	Guano	7,522	35.45		
COSTA	MANABI	Paján	7,448	20.07		
COSTA	GUAYAS	Urvina Jado	7,055	21.34		
COSTA	EL ORO	Zaruma	6,822	45.42		
SIERRA	LOJA	Paltas	6,447	32.19		
SIERRA	IMBABURA	Cotacachi	6,144	30.71		
COSTA	M.SANTIAGO	Sucua	5,866	32.44		
SIERRA	TUNGURAHUA	San Pedro de Pe	5,857	35.94		
COSTA	MANABI	24 de Mayo	5,752	20.89		
COSTA	LOS RIOS	Pueblviejo	5,563	34.68		
SIERRA	CHIMBORAZO	Alausí	5,282	23.39		

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Table A5. Factor of Satisfaction of Basic Needs, Average per Groups of Cities

Region	Province	Canton	Urban Population 1989	Quality of Life Index (FSBN) 1/	Average FSBN Seven groups of cities	Average FSBN Three Major Categories of Cities
SIERRA	IMBABURA	Pimampiro	5,277	28.41		
SIERRA	TUNGURAHUA	Santiago de Ptl	5,272	38.94		
SIERRA	BOLIVAR	San Miguel	5,025	33.84		
SIERRA	COTOPAXI	Pujill	5,022	22.61		
COSTA	EL ORO	Portovelo	4,879	48.83		
COSTA	Z.CHINCHIPE	Yantzaza	4,758	39.02		
COSTA	ESMERALDAS	Eloy Alfaro	4,582	24.00		
COSTA	MANABI	Junín	4,543	25.29		
COSTA	GALAPAGOS	Santa Cruz	4,523	49.97		
COSTA	ESMERALDAS	Huisne	4,430	22.31		
SIERRA	CANAR	Biblián	4,370	37.58		
SIERRA	LOJA	Celica	4,342	33.20		
COSTA	M.SANTIAGO	Gualaquiza	4,228	35.91		
SIERRA	AZUAY	Sigsig	4,170	23.71		
COSTA	LOS RIOS	Urdaneta	4,118	41.12		
SIERRA	CARCHI	Espejo	4,092	51.76		
SIERRA	LOJA	Puyango	4,041	33.66		
SIERRA	CHIMBORAZO	Chunchi	3,895	31.86		
SIERRA	BOLIVAR	Chimbo	3,685	33.16		
SIERRA	COTOPAXI	Saquisilí	3,460	24.66		
SIERRA	AZUAY	Girón	3,296	27.19		
COSTA	M.SANTIAGO	Limón Indanza	3,250	34.54		
COSTA	Z.CHINCHIPE	Chinchipe	3,021	31.23		
SIERRA	AZUAY	Paute	2,947	26.28		
SIERRA	CARCHI	Mira	2,909	38.15		
SIERRA	BOLIVAR	Chillanes	2,865	25.80		
SIERRA	AZUAY	Santa Isabel	2,718	25.89		
COSTA	NAPO	Archidón	2,620	21.77		
SIERRA	LOJA	Saraguro	2,561	28.95		
SIERRA	TUNGURAHUA	Patate	2,377	32.74		
COSTA	GALAPAGOS	San Cristobal	2,321	60.89		
COSTA	M.SANTIAGO	Palora	2,241	21.74		
SIERRA	PICHINCHA	Pedro Moncayo	2,125	39.18		
SIERRA	LOJA	Gonzanamá	1,887	28.59		
SIERRA	LOJA	Espíndola	1,826	20.31		
COSTA	M.SANTIAGO	Santiago	1,701	36.07		
SIERRA	TUNGURAHUA	Quero	1,670	32.08		
SIERRA	COTOPAXI	Pangua	1,488	23.66		
COSTA	SUCUMBIO	Putumayo	1,336	26.72		
SIERRA	LOJA	Zapotillo	1,168	25.91		
SIERRA	LOJA	Sacra	875	29.26		
COSTA	GALAPAGOS	Isabela	805	44.50		
COSTA	PASTAZA	Mera	662	56.33		
COSTA	NAPO	Quijos	442	33.35		
COSTA	SUCUMBIO	Sucumbios	272	27.13		

Source: AME Asociación de Municipalidades del Ecuador, 1989

INNFA ,INSTITUTO NACIONAL DE NIÑO Y LA FAMILIA, 1989

1/ From Table A1, FSBN=(A*0.3)+(B*0.2)+((100-C)*0.2)+(D*0.15)+(E*0.15)

Table A6. Nutrition index per city and per region (Costa)

Region	Province	Canton	Urban		
			Population	1989 Nutrition 1/	Ranking
COSTA	GALAPAGOS	San Cristobal	2,321	84.00	1
COSTA	GALAPAGOS	Isabela	805	77.00	2
COSTA	LOS RIOS	Urdaneta	4,118	76.00	3
COSTA	M.SANTIAGO	Gualaquiza	4,228	73.00	4
COSTA	GALAPAGOS	Santa Cruz	4,523	72.00	5
COSTA	PASTAZA	Mera	662	71.00	6
COSTA	EL ORO	Santa Rosa	38,802	69.00	7
COSTA	GUAYAS	Samborondón	9,703	68.00	8
COSTA	GUAYAS	Guayaquil	1,699,375	68.00	9
COSTA	GUAYAS	Naranjal	14,684	68.00	10
COSTA	GUAYAS	Yaguachi	10,088	68.00	11
COSTA	EL ORO	Pasaje	34,586	68.00	12
COSTA	GUAYAS	El Empalme	26,178	68.00	13
COSTA	GUAYAS	Milagro	112,089	67.00	14
COSTA	Z.CHINCHIPE	Yantzaza	4,758	66.00	15
COSTA	EL ORO	Huaquillas	32,577	66.00	16
COSTA	EL ORO	Zaruma	6,822	65.00	17
COSTA	MANABI	Sucre	15,030	62.00	18
COSTA	GUAYAS	Daule	27,141	62.00	19
COSTA	M.SANTIAGO	Santiago	1,701	61.00	20
COSTA	EL ORO	Machala	158,798	60.00	21
COSTA	LOS RIOS	Quevedo	101,155	60.00	22
COSTA	MANABI	Portoviejo	156,250	60.00	23
COSTA	ESMERALDAS	San Lorenzo	15,281	59.00	24
COSTA	PASTAZA	Pastaza	15,731	59.00	25
COSTA	SUCUMBIO	Lago Agric	13,596	58.00	26
COSTA	SUCUMBIO	Sucumbios	272	58.00	27
COSTA	LOS RIOS	Puebloviejo	5,563	58.00	28
COSTA	MANABI	Rocafuerte	8,095	56.00	29
COSTA	ESMERALDAS	Esmeraldas	130,944	56.00	30
COSTA	GUAYAS	Urvina Jado	7,055	55.00	31
COSTA	ESMERALDAS	Eloy Alfaro	4,582	55.00	32
COSTA	EL ORO	Arenillas	13,029	55.00	33
COSTA	M.SANTIAGO	Morona	8,365	55.00	34
COSTA	M.SANTIAGO	Palora	2,241	55.00	35
COSTA	M.SANTIAGO	Sucua	5,864	55.00	36
COSTA	Z.CHINCHIPE	Zamora		54.00	37
COSTA	LOS RIOS	Ventanas	25,382	54.00	38
COSTA	LOS RIOS	Babahoyo	60,569	53.00	39
COSTA	MANABI	Santa Ana	7,572	52.00	40
COSTA	EL ORO	El Guabo	10,669	51.00	41
COSTA	NAPO	Quijos	442	51.00	42
COSTA	MANABI	Bolivar	12,747	50.00	43
COSTA	GUAYAS	Naranjito	14,770	50.00	44
COSTA	M.SANTIAGO	Limón Indanza	3,250	50.00	45
COSTA	EL ORO	Portovelo	4,879	49.00	46
COSTA	MANABI	Chone	48,557	49.00	47
COSTA	EL ORO	Pinas	11,566	45.00	48
COSTA	LOS RIOS	Vinces	20,739	45.00	49
COSTA	NAPO	Archidona	2,620	39.00	50
COSTA	GUAYAS	Salinas	26,584	36.00	51
COSTA	Z.CHINCHIPE	Chinchipe	3,021	36.00	52
COSTA	MANABI	Paján	7,448	36.00	53
COSTA	NAPO	Tena	8,127	34.00	54
COSTA	MANABI	Manta	149,011	32.00	55
COSTA	ESMERALDAS	Muisne	4,430	31.00	56
COSTA	GUAYAS	Balzar	26,074	30.00	57
COSTA	MANABI	Jumín	4,543	28.00	58
COSTA	MANABI	24 de Mayo	5,752	23.00	59
COSTA	MANABI	Montecristi	10,634	17.00	60

Table A6. Nutrition index per city and per region (Sierra)

Region	Province	Canton	Urban	Nutrition 1/	Ranking
			Population 1989		
SIERRA	PICHINCHA	Santo Domingo	119,127	64.00	1
SIERRA	CARCHI	Espejo	4,092	62.00	2
SIERRA	CARCHI	Tulcán	40,839	62.00	3
SIERRA	LOJA	Loja	103,183	58.00	4
SIERRA	LOJA	Sozoranga	875	58.00	5
SIERRA	TUNGURAHUA	Banos	11,673	58.00	6
SIERRA	TUNGURAHUA	Quero	1,670	58.00	7
SIERRA	LOJA	Calvas	13,046	56.00	8
SIERRA	LOJA	Puyango	4,041	56.00	9
SIERRA	PICHINCHA	Ruminahui	21,732	55.00	10
SIERRA	CANAR	Biblián	4,370	54.00	11
SIERRA	LOJA	Paltas	6,447	53.00	12
SIERRA	COTOPAXI	Latacunga	38,482	53.00	13
SIERRA	LOJA	Zapotillo	1,168	52.00	14
SIERRA	BOLIVAR	Chimbo	3,685	52.00	15
SIERRA	PICHINCHA	Cayambe	18,663	52.00	16
SIERRA	AZUAY	Santa Isabel	2,718	52.00	17
SIERRA	LOJA	Macerá	14,220	50.00	18
SIERRA	LOJA	Catamayo	14,321	48.00	19
SIERRA	TUNGURAHUA	Santiago de Pil	5,272	48.00	20
SIERRA	TUNGURAHUA	Ambato	133,643	47.00	21
SIERRA	BOLIVAR	Guaranda	16,829	47.00	22
SIERRA	IMBABURA	Cotacachi	6,144	46.00	23
SIERRA	LOJA	Celica	4,342	46.00	24
SIERRA	CARCHI	Montúfar	14,146	46.00	25
SIERRA	IMBABURA	Antonio Ante	15,291	46.00	26
SIERRA	CARCHI	Mira	2,909	45.00	27
SIERRA	COTOPAXI	Pangua	1,488	44.00	28
SIERRA	LOJA	Gonzanamá	1,887	43.00	29
SIERRA	PICHINCHA	Mejía	8,580	43.00	30
SIERRA	LOJA	Saraguro	2,561	42.00	31
SIERRA	COTOPAXI	Pujilí	5,022	42.00	32
SIERRA	BOLIVAR	Chillanes	2,865	41.00	33
SIERRA	IMBABURA	Ibarra	72,016	40.00	34
SIERRA	COTOPAXI	Salcedo	7,824	40.00	35
SIERRA	CANAR	Azuques	19,317	40.00	36
SIERRA	CHIMBORAZO	Alausí	5,282	39.00	37
SIERRA	BOLIVAR	San Miguel	5,025	37.00	38
SIERRA	AZUAY	Cuenca	218,490	37.00	39
SIERRA	TUNGURAHUA	San Pedro de Pe	5,857	36.00	40
SIERRA	AZUAY	Gualaceo	9,124	36.00	41
SIERRA	PICHINCHA	Pedro Moncayo	2,125	36.00	42
SIERRA	IMBABURA	Otavalo	23,494	36.00	43
SIERRA	AZUAY	Girón	3,296	34.00	44
SIERRA	CHIMBORAZO	Chunchi	3,895	34.00	45
SIERRA	CHIMBORAZO	Riobamba	98,554	31.00	46
SIERRA	LOJA	Espíndola	1,826	31.00	47
SIERRA	TUNGURAHUA	Patate	2,377	31.00	48
SIERRA	PICHINCHA	Quito	1,233,865	29.00	49
SIERRA	AZUAY	Paute	2,947	29.00	50
SIERRA	AZUAY	Sigsig	4,170	27.00	51
SIERRA	COTOPAXI	Squisilí	3,460	25.00	52
SIERRA	CANAR	Canar	14,824	23.00	53
SIERRA	CHIMBORAZO	Guano	7,522	22.00	54
SIERRA	IMBABURA	Pimampiro	5,277	19.00	55

Source: Malnutrition index, Instituto Nacional del Niño y la Familia, (INNFA), 1989.

1/ Calculated as the difference of 100 minus malnutrition index.

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Table A7. Nutrition index per city

Region	Province	Canton	Urban Population 1989	Nutrition 1/	Ranking
COSTA	GALAPAGOS	San Cristobal	2,321	84.00	1
COSTA	GALAPAGOS	Isabela	805	77.00	2
COSTA	LOS RIOS	Urdaneta	4,118	76.00	3
COSTA	M.SANTIAGO	Gualaquiza	4,228	73.00	4
COSTA	GALAPAGOS	Santa Cruz	4,523	72.00	5
COSTA	PASTAZA	Mera	662	71.00	6
COSTA	EL ORO	Santa Rosa	38,802	69.00	7
COSTA	GUAYAS	El Empalme	26,178	68.00	8
COSTA	GUAYAS	Samborondón	9,703	68.00	9
COSTA	EL ORO	Pasaje	34,586	68.00	10
COSTA	GUAYAS	Yaguachi	10,088	68.00	11
COSTA	GUAYAS	Naranjal	14,684	68.00	12
COSTA	GUAYAS	Guayaquil	1,699,375	68.00	13
COSTA	GUAYAS	Milagro	112,089	67.00	14
COSTA	Z.CHINCHIPE	Yantzaza	4,758	66.00	15
COSTA	EL ORO	Huaquillas	32,577	66.00	16
COSTA	EL ORO	Zaruma	6,822	65.00	17
SIERRA	PICHINCHA	Santo Domingo	119,127	64.00	18
SIERRA	CARCHI	Tulcán	40,839	62.00	19
COSTA	GUAYAS	Daule	27,141	62.00	20
COSTA	MANABI	Sucre	15,030	62.00	21
SIERRA	CARCHI	Espejo	4,092	62.00	22
COSTA	M.SANTIAGO	Santiago	1,701	61.00	23
COSTA	EL ORO	Machala	158,798	60.00	24
COSTA	MANABI	Portoviejo	156,250	60.00	25
COSTA	LOS RIOS	Quevedo	101,155	60.00	26
COSTA	PASTAZA	Pastaza	15,731	59.00	27
COSTA	ESMERALDAS	San Lorenzo	15,281	59.00	28
SIERRA	LOJA	Loja	103,183	58.00	29
SIERRA	LOJA	Sozoranga	875	58.00	30
COSTA	SUCUMBIOS	Lago Agrio	13,596	58.00	31
SIERRA	TUNGURAHUA	Baños	11,673	58.00	32
COSTA	SUCUMBIOS	Sucumbios	272	58.00	33
COSTA	LOS RIOS	Puebloviejo	5,563	58.00	34
SIERRA	TUNGURAHUA	Quero	1,670	58.00	35
SIERRA	LOJA	Puyango	4,041	56.00	36
COSTA	MANABI	Rocafuerte	8,095	56.00	37
COSTA	ESMERALDAS	Esmeraldas	130,944	56.00	38
SIERRA	LOJA	Calvas	13,046	56.00	39
COSTA	EL ORO	Arenillas	13,029	55.00	40
COSTA	M.SANTIAGO	Morona	8,365	55.00	41
COSTA	M.SANTIAGO	Palora	2,241	55.00	42
COSTA	GUAYAS	Urvina Jado	7,055	55.00	43
SIERRA	PICHINCHA	Ruminahui	21,732	55.00	44
COSTA	ESMERALDAS	Eloy Alfaro	4,582	55.00	45
COSTA	M.SANTIAGO	Sucua	5,866	55.00	46
SIERRA	CANAR	Biblián	4,370	54.00	47
COSTA	LOS RIOS	Ventanas	25,382	54.00	48
COSTA	Z.CHINCHIPE	Zamora		54.00	49
COSTA	LOS RIOS	Babahoyo	60,569	53.00	50
SIERRA	COTOPAXI	Latacunga	38,482	53.00	51
SIERRA	LOJA	Paltas	6,447	53.00	52
SIERRA	BOLIVAR	Chimbo	3,685	52.00	53
SIERRA	LOJA	Zapotillo	1,168	52.00	54
COSTA	MANABI	Santa Ana	7,572	52.00	55
SIERRA	PICHINCHA	Cayambe	18,663	52.00	56
SIERRA	AZUAY	Santa Isabel	2,718	52.00	57
COSTA	EL ORO	El Guabo	10,669	51.00	58
COSTA	NAPO	Quijos	442	51.00	59
SIERRA	LOJA	Macará	14,220	50.00	60
COSTA	GUAYAS	Naranjito	14,770	50.00	61
COSTA	MANABI	Bolívar	12,747	50.00	62
COSTA	M.SANTIAGO	Limón Indanza	3,250	50.00	63
COSTA	EL ORO	Portovelo	4,879	49.00	64
COSTA	MANABI	Chone	48,557	49.00	65
SIERRA	LOJA	Catamayo	14,321	48.00	66
SIERRA	TUNGURAHUA	Santiago de Pil	5,272	48.00	67
SIERRA	BOLIVAR	Guaranda	16,829	47.00	68
SIERRA	TUNGURAHUA	Ambato	133,643	47.00	69
SIERRA	IMBABURA	Antonio Ante	15,291	46.00	70
SIERRA	IMBABURA	Cotacachi	6,144	46.00	71
SIERRA	CARCHI	Montúfar	14,146	46.00	72
SIERRA	LOJA	Celica	4,342	46.00	73

Table A7. Nutrition index per city

Region	Province	Canton	Urban	Nutrition 1/	Ranking
			Population		
SIERRA	CARCHI	Mira	2,909	45.00	74
COSTA	LOS RIOS	Vinces	20,739	45.00	75
COSTA	EL ORO	Pinas	11,566	45.00	76
SIERRA	PICHINCHA	Mejía	8,580	43.00	78
SIERRA	LOJA	Gonzanamá	1,887	43.00	79
SIERRA	COTOPAXI	Pujilí	5,022	42.00	80
SIERRA	LOJA	Saraguro	2,561	42.00	81
SIERRA	BOLIVAR	Chillanes	2,865	41.00	82
SIERRA	COTOPAXI	Salcedo	7,824	40.00	83
SIERRA	IMBABURA	Ibarra	72,016	40.00	84
SIERRA	CANAR	Azogues	19,317	40.00	85
SIERRA	CHIMBORAZO	Alausí	5,282	39.00	86
COSTA	NAPO	Archidona	2,620	39.00	87
SIERRA	BOLIVAR	San Miguel	5,025	37.00	88
SIERRA	AZUAY	Cuenca	218,490	37.00	89
COSTA	GUAYAS	Salinas	26,584	36.00	90
SIERRA	AZUAY	Gualaico	9,124	36.00	91
COSTA	Z.CHINCHIPE	Chinchipe	3,021	36.00	92
SIERRA	IMBABURA	Otavalo	23,494	36.00	93
COSTA	MANABI	Paján	7,448	36.00	94
SIERRA	TUNGURAHUA	San Pedro de Pe	5,857	36.00	95
SIERRA	PICHINCHA	Pedro Moncayo	2,125	36.00	96
COSTA	NAPO	Tena	8,127	34.00	97
SIERRA	AZUAY	Girón	3,296	34.00	98
SIERRA	CHIMBORAZO	Chunchi	3,895	34.00	99
COSTA	MANABI	Manta	149,011	32.00	100
COSTA	ESMERALDAS	Muisne	4,430	31.00	101
SIERRA	LOJA	Espíndola	1,826	31.00	102
SIERRA	CHIMBORAZO	Riobamba	98,554	31.00	103
SIERRA	TUNGURAHUA	Patate	2,377	31.00	104
COSTA	GUAYAS	Balzar	26,074	30.00	105
SIERRA	PICHINCHA	Quito	1,233,865	29.00	106
SIERRA	AZUAY	Paute	2,947	29.00	107
COSTA	MANABI	Junín	4,543	28.00	108
SIERRA	AZUAY	Sigsig	4,170	27.00	109
SIERRA	COTOPAXI	Saquisilí	3,460	25.00	110
COSTA	MANABI	24 de Mayo	5,752	23.00	111
SIERRA	CANAR	Canar	14,824	23.00	112
SIERRA	CHIMBORAZO	Guano	7,522	22.00	113
SIERRA	IMBABURA	Pimampiro	5,277	19.00	114
COSTA	MANABI	Montecristi	10,634	17.00	115

Source: Malnutrition index, Instituto Nacional del Niño y la Familia, (INNFA), 1989.

1/ Calculated as the difference of 100 minus malnutrition index.

Malnutrition Index in Ecuador

Source

The information used as the indicator for malnutrition in this study was provided to the Consultants by the Instituto Nacional del Niño y la Familia (INNFA). INNFA obtained this information from the study conducted by Yolanda Grijalba and others known as the "Plan de Reducción de la Enfermedad y Muerte Infantil" (PREMI), conducted under "Estudio sobre el Crecimiento Físico de los Niños en el Ecuador," a program under the auspices of the Ministry of Finance and the Instituto Nacional de Investigaciones Nutricionales y Médicos Sociales (ININM).

Methodology for Estimation

This malnutrition index was based on a field survey of the weight of 105,000 children from 20 provinces and 130 cantons. This survey took place in 1986. Samples of 100 children per canton were randomly collected, and their weights were compared to the distribution of infant population under one year old reported by the 1982 census. Each child's weight was compared to the international standards of weight used by the World Health Organization, and a difference was estimated.

Data Reliability

PREMI's malnutrition index is the only one in Ecuador that provides a breakdown by city and canton. PREMI elaborated two indices, one for children under one year old and the other for children under two. For purposes of this study, the index for children under two years old was used. An example of the absolute numbers measuring malnutrition in Quito, Guayaquil, and Cuenca according to these two indices is the following:

City	Malnutrition Index for 1986	
	Children under one year	Children under two years
Quito	28%	71%
Guayaquil	12%	32%
Cuenca	28%	63%

When a concern about the absolute number for Quito was pointed out, INNFA responded that Guayaquil's percentage could be underestimated, but it stated that in qualitative terms, Guayaquil would still report better conditions of nutrition.

This conclusion is supported by the 1988 study on infant malnutrition in Quito, Guayaquil, and Cuenca conducted by CONADE and the Ministry of Health (Wilma Freire, *Diagnóstico de la Situación Alimentaria Nutricional y de la Salud de la Población Ecuatoriana Menor de 5 Años*, 1988, p. 226). This study used several indicators, including weight, to characterize the problems of malnutrition prevailing in Quito, Guayaquil, and Cuenca. According to Table 41 of that study (which reports the Malnutrition Index in Quito and Guayaquil), the malnutrition rates for Quito and Guayaquil based on standards of children's weight are:

Quito	34%
Guayaquil	25%

and in terms of height, are:

Quito	47.3%
Guayaquil	34.5%