
políticas sociales

Poverty, hunger and food
security in Central America and
Panama

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This report was prepared under the agreement between the United Nations World Food Programme (WFP) and the Economic Commission for Latin America and the Caribbean (ECLAC) as a contribution to understanding of the various aspects relating to the problem of hunger in Latin America and the Caribbean. This first regional analytical report provides detailed information on hunger, food insecurity and undernutrition in the Central American countries and Panama and forms part of the discussion papers for the Ministerial-level Forum on Hunger sponsored by the WFP and ECLAC and held on 16 and 17 December in Panama City. Both the research work and the publication of this document were made possible by the generous support and finance given to the United Nations World Food Programme by the United Kingdom Department for International Development.

This is a summary of the main topics dealt with in the above-named document, which forms part of the cooperation agreement signed between the Regional Office of the World Food Programme (WFP) and the Economic Commission for Latin America and the Caribbean (ECLAC) early in 2003. It was prepared by Ernesto Espíndola, Arturo León and Rodrigo Martínez of the ECLAC Social Development Division and the consultant Alexander Schejtman.

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Summary

Food insecurity and hunger are closely associated with extreme poverty in Latin America and the Caribbean, but they should not be confused with it. A diet which is insufficient for leading a normal life and is also inadequate from a nutritional point of view affects not only those living in conditions of extreme poverty but also broader sectors and groups living in particular areas or regions of each country. Among the forms of deprivation affecting those living in a state of extreme poverty, however, the lack of access to food is the most serious problem and that which it is most urgent to eradicate. The importance of doing away with the most extreme hunger situations is reflected in the fact that the first development goal of the Millennium Declaration is the eradication of hunger from our planet, which is made the subject of specific targets and is given the same priority as the alleviation of poverty.

Child undernutrition is the most serious manifestation of the ongoing lack of foodstuffs of sufficient quantity and quality to meet the energy needs of the whole population. Of the two forms which this undernutrition takes –low weight and low height for age– the retardation of growth is particularly serious in the countries of the region, both because of its high level of incidence and its irreversible ill-effects on the development of individuals and society.

Since the International Conference on Nutrition (Rome, 1992) and the World Food Summit (Rome, 1996), concern over food security and hunger has been displayed more and more clearly in the formulation of national food and nutritional security policies.

In the Central American countries, various types of action have been taken in support of these initiatives, including in particular the establishment in 1991 of the Council of Central American Ministers of Health (COMISCA) and the Regional Commission on Social Affairs (CRAS); the Social Integration Subsystem of the Central American Integration System (SISCA/SICA), which was set up in 1993; the Fourteenth Summit Meeting of Central American Presidents (Guatemala, 1993), which ratified the Regional Food and Nutritional Security Initiative (SAN) promoted by the Central American and Panamanian Nutritional Institute (INCAP/PAHO); the 1996 World Food Summit, at which the countries of the region pledged "... our political will and our common and national commitment to achieving food security for all and to an ongoing effort to eradicate hunger in all countries, with an immediate view to reducing the number of undernourished people to half their present level no later than 2015."; and the mandates of the Twenty-second Iberoamerican Presidential Summit in December 2002, which include the adoption of a Strategic Framework prepared by the Central American Agricultural Council (CAC) to cope with the situation of food and nutritional insecurity associated with the prevailing conditions of drought and climate change.

The main challenge has been to secure the assignment of high priority to food security on national policy agendas. The questions that this document seeks to address are to what extent the objectives aimed at relieving hunger are being attained and the causes and particular consequences of this phenomenon in the Central American countries.

In order to find the answers to these questions, in early 2003 the Regional Office of the World Food Programme (WFP) and the Economic Commission for Latin America and the Caribbean (ECLAC) signed a three-year cooperation agreement which includes the preparation of a special chapter on hunger, undernutrition and poverty for the *Social Panorama of Latin America, 2002-2003*, as well as three annual reports analyzing this matter for groups of countries. Because of the seriousness of the problem, the first country group dealt with consists of the Central American countries and Panama.

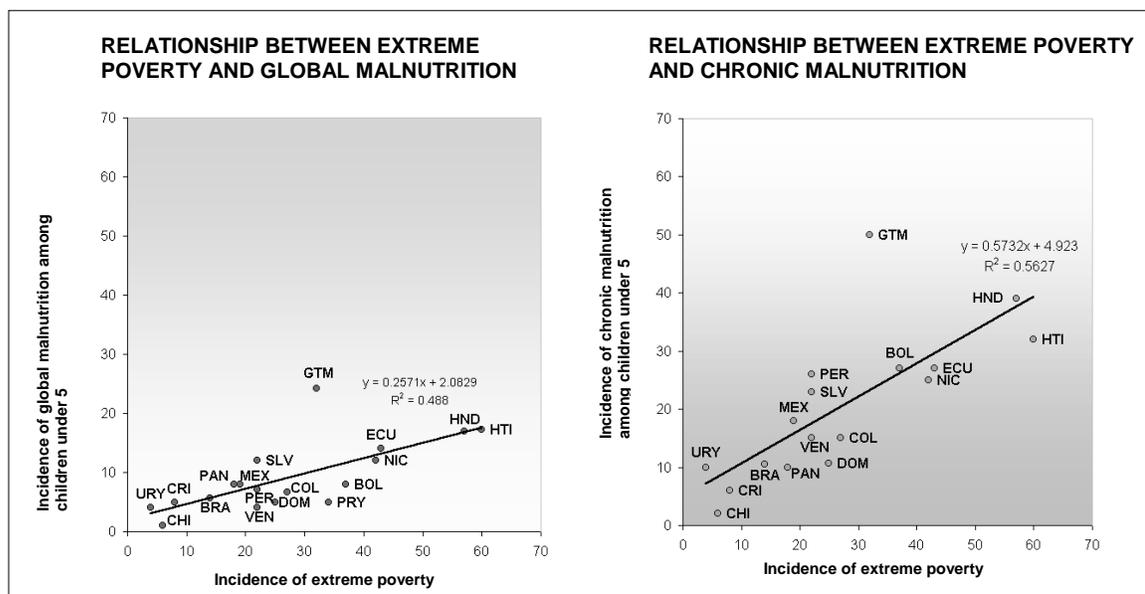
a) Poverty and hunger in Latin America and the Caribbean

Although the eradication of extreme poverty is a central element in the struggle against hunger, the efforts to reduce such poverty cannot be expected, alone, to secure the eradication of hunger and its main consequence – child undernutrition – within a reasonable length of time. At the same time, however, the attainment of significant achievements in the fight against undernutrition does not necessarily call for wide-ranging and costly anti-poverty programmes.

The following figures show that the shortage of resources in Latin America and Caribbean households is far from accounting, on its own, for the level of child undernutrition observed. El Salvador and Nicaragua, for example, which have very different levels of poverty, register similar rates of chronic undernutrition, while although Guatemala has a similar level of extreme poverty to that of Colombia, the two countries are very different in terms of chronic undernutrition. The same is true of weight deficit.

Figure 1

LATIN AMERICA AND THE CARIBBEAN (18 COUNTRIES): RELATIONSHIP BETWEEN EXTREME POVERTY^{a/}, GLOBAL MALNUTRITION AND CHRONIC MALNUTRITION, AROUND 1999



Source: **Extreme poverty:** ECLAC, *Social Panorama of Latin America 2001-2002*. **Global Malnutrition** (moderate to severe weight-for-age deficiency): United Nations Children's Fund (UNICEF), *The State of the World's Children 2003*. **Chronic Malnutrition:** ¿Está disminuyendo la malnutrición? Análisis de la evolución del nivel de malnutrición infantil desde 1980, Mercedes de Onis, Edward A. Frongillo and Monika Blössner, *Boletín de la Organización Mundial de la Salud, Collected Articles N° 4*, 2001.

Note: ^(a) The figures on the incidence of extreme poverty are ECLAC estimates and correspond to the measurements closest to 1999.

Comparison of individual-level data from demographic and health surveys (DHS), on the basis of two Central American surveys which give estimates for both variables together (Guatemala, 1995 and Nicaragua, 1998), makes it possible to conclude that the association between hunger (in its most extreme manifestation, which is child undernutrition) and income deficit (and other factors associated with poverty situations) is far from perfect and is even not very high. On the one hand, over two-thirds of the child population of households suffering from extreme poverty do not register low weight for age, and on the other hand, a very high proportion of children under five with weight deficit do not live in extremely poor households and may even live in households that are above the poverty line. The same is true of chronic undernutrition.

Thus, combating hunger is not the same as combating poverty, as reflected, inter alia, in the fact that the Millennium Declaration sets independent goals for the reduction of these two scourges by 50% by the year 2015, with two separate groups of indicators.

There are also a number of factors which protect against or make up for undernutrition, which would explain why a considerable proportion of children in extremely poor households show no signs of undernutrition. Among these factors are mechanisms of biological and metabolic adaptation to low levels of food intake and similar mechanisms of adaptation of conduct, which are often reflected in lower levels of physical activity and performance. In addition, there are factors which make it possible to offset the effects of poverty through the intra-family redistribution of food in favour of children at the expense of their mothers, and the social networks in which poor households take part and which enable them to relieve the most extreme situations of food shortage.

Analysis of undernutrition and food insecurity in Latin America and the Caribbean shows that around the year 2000, 18.5% of the total population were in a state of extreme poverty, 11% (nearly 54 million people) were undernourished, and almost 8% of children under the age of five registered low weight for age. Although these figures are not as dramatic as in other developing regions, the use of stricter indicators reveals a more serious situation: undernutrition affects nearly 22% of the population (on the basis of average calorie requirements) and almost 21% of Latin American and Caribbean children suffer from moderate or serious undernutrition.

The differences between countries are quite marked. The undernutrition estimates of the United Nations Food and Agriculture Organization (FAO) show that in seven countries over 20% of the population suffer from hunger, while in six countries the figure is no more than 5%. It may be noted that out of the seven countries with the highest proportions of undernutrition in the region, three are Central American (Guatemala, Honduras and Nicaragua).

Twenty of the 23 countries of Latin America and the Caribbean managed to reduce the proportion of the population affected by undernutrition in the 1990s. A key factor in this was the increase in the internal per capita availability of food, which made up for the increase (slight in most cases) in inequality of access to food. It may be noted that among the countries where the indices of undernutrition increased, two are in Central America (El Salvador and Guatemala). This would appear to be due mainly to a decline in per capita food availability as a result of the drop in domestic production and import capacity.

The incidence of retarded growth continues to be very high in Central America: in El Salvador, Guatemala, Honduras and Nicaragua it affects over 20% of all children under the age of five. In contrast, Costa Rica is at the other extreme and is among the three countries with levels of 5% or less.

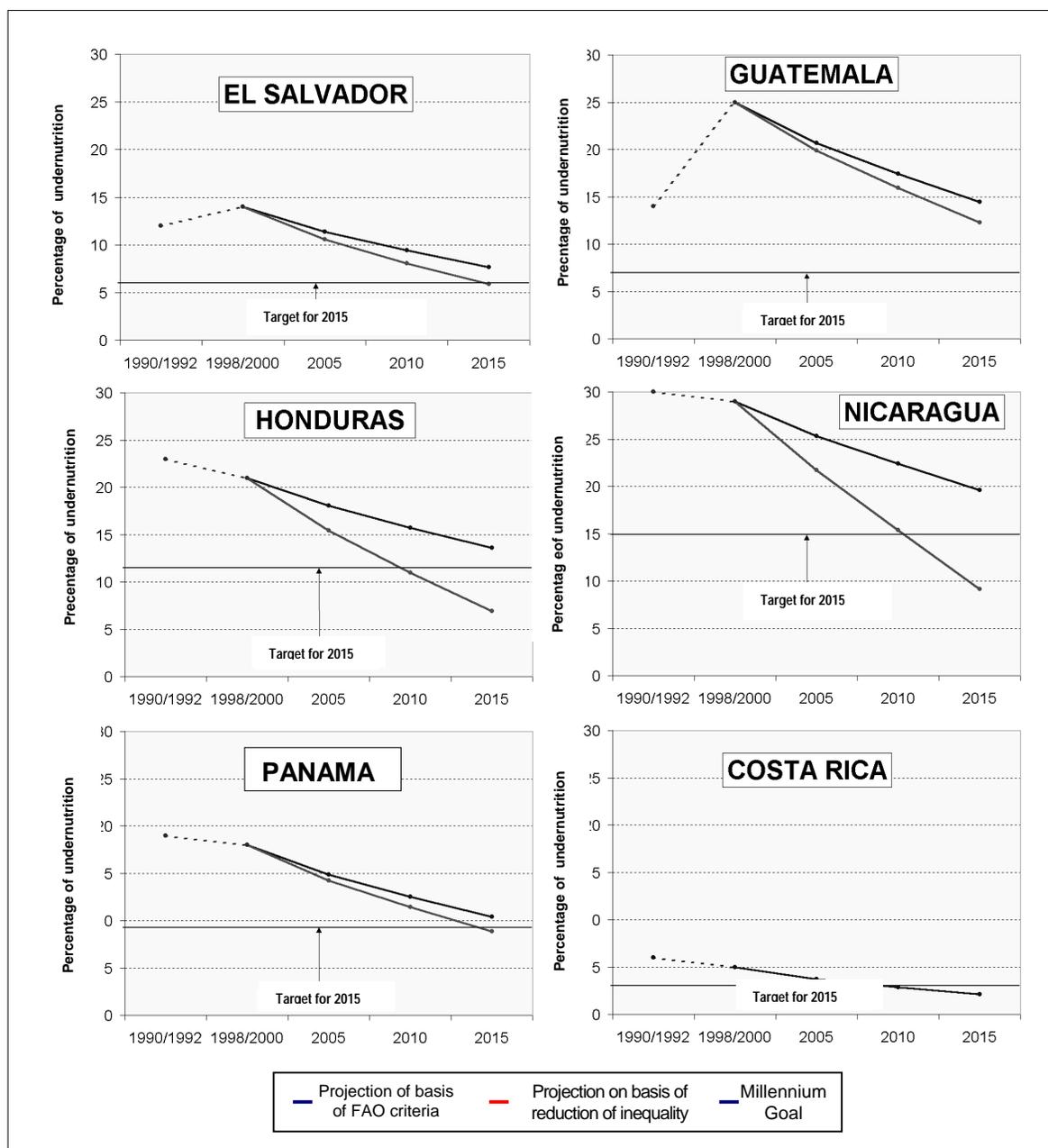
b) Towards achievement of the goals on hunger in Central America and Panama

Analysis of the possibilities of attaining the Millennium Goals on hunger shows that the only countries in the region which would not attain the goals on undernutrition and child malnutrition are Central American: El Salvador, Guatemala, Honduras and Nicaragua. Panama would attain the goal on child malnutrition but not that on undernutrition.

In the Central American countries, as in the rest of the region, there is pronounced inequality in access to food: the most pronounced, on average, of all the regions of the world. This situation means that a certain proportion of the population do not have access to the food they need because of their lack of resources for acquiring it, rather than a deficit in the aggregate supply of food.

Figure 2 shows that reduction of the disparities in access to food between geographical areas and population income strata is the main means whereby these countries could attain the goals laid down in the Millennium Declaration. If, in the coming years (up to 2015), the marked inequality of access to food currently displayed by these countries could be brought down to a level similar to that currently displayed by Costa Rica, almost all of them (El Salvador, Honduras, Nicaragua and Panama) would attain the goal in terms of reduction of undernutrition. Only Guatemala would fail to reach it, but even so the reduction in inequality would enable the percentage of the population suffering from undernutrition to be brought below the level of the early 1990s. This indicates that in Guatemala the determining factor in its food insecurity problem is the very low level of the domestic supply of food, aggravated by inequalities of access.

Figure 2
PROJECTIONS UNDERNUTRITION IN FIVE CENTRAL AMERICAN COUNTRIES ACCORDING TO THE FAO CRITERIA, AND REDUCTION OF INEQUALITY IN FOOD ACCESS TO THE PRESENT LEVELS OF COSTA RICA, BY THE YEARS 2005, 2010 AND 2015



Source: ECLAC projections of levels of undernutrition on the basis of hypotheses of the United Nations Food and Agriculture Organization (FAO) on the evolution of the supply of food energy, minimum nutritional requirements and the coefficient of variability of access to food consumption. The second projection includes the criterion of reduction of the coefficient of variability to the present levels of Costa Rica (0.25).

c) Food insecurity

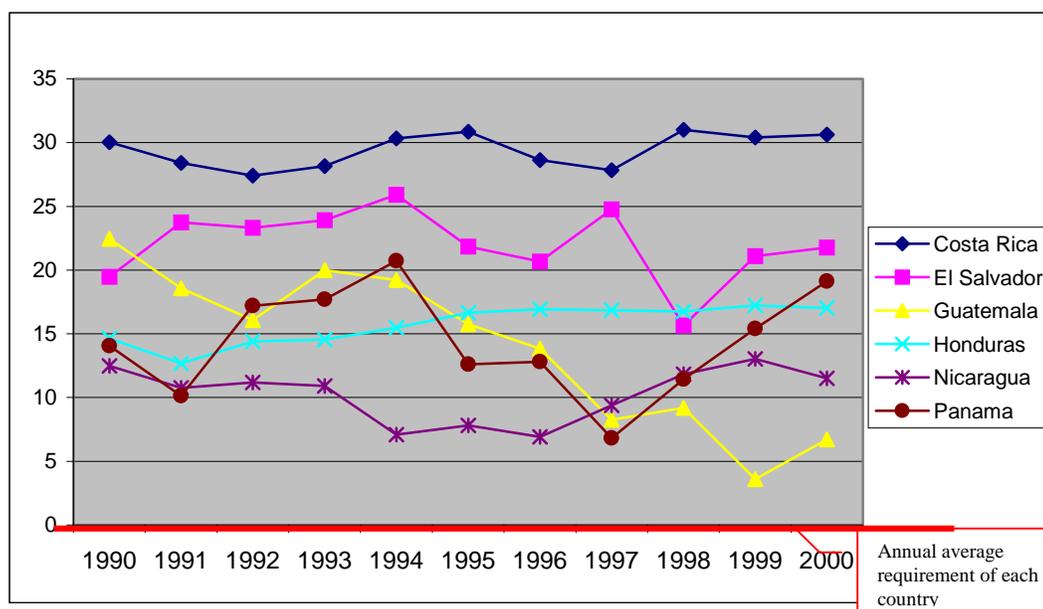
In analyzing the food and nutritional security (FNS) situation in Central America, the dimensions of availability, sufficiency, access and safety were taken into account.

A food supply is sufficient if it makes it possible to satisfy both the effective existing demand and the basic food needs of those sectors which, because of income problems, cannot translate their needs into market demand. Traditionally, the analysis of sufficiency has been based on calculating the food energy supply of a country, through the FAO food balance sheets, and then comparing the result with the *minimum requirement* for ensuring that all the members of the country's population survive, as a function of their age and sex distribution, at a minimum level of physical activity (around 1,800 kcal/day). In order to incorporate the energy need differential arising from people's different levels of activity, however, we have opted to use the *average requirement* instead.

Comparative analysis between the FNS and the annual average requirements of each of the Central American countries shows that for the 1990-2000 period (as percentage distances of the former with respect to the latter, which range between 1,947 and 2,116 kcal/person/day), all the countries had a quantity of kilocalories greater than their average energy requirements, but the surplus would not be enough to make up for internal disparities in access. Costa Rica has a stable food supply some 30% greater than its average requirements, but this would not be enough to eradicate undernutrition, despite the country's low level of inequality in access to food.

The other countries have higher levels of inequality, so that they need a larger supply of food to cover their average requirements and eradicate undernutrition. Albeit with differences in time, at the end of the decade El Salvador, Panama and Honduras had food supplies that were around 20% greater, while in Nicaragua the supply was only some 10% higher. The most disturbing situation is that of Guatemala, where there has been a progressive decline in FNS to a point where the supply is only about 5% above the average requirements, which is in keeping with the country's high levels of malnutrition and undernutrition.

Figure 3
CENTRAL AMERICA (5 COUNTRIES) AND PANAMA: COMPARISON OF FOOD ENERGY SUPPLY WITH ANNUAL AVERAGE REQUIREMENTS, 1990-2000
(Percentages)



Source: Special processing of food balance sheets of the United Nations Food and Agriculture Organization (FAO).

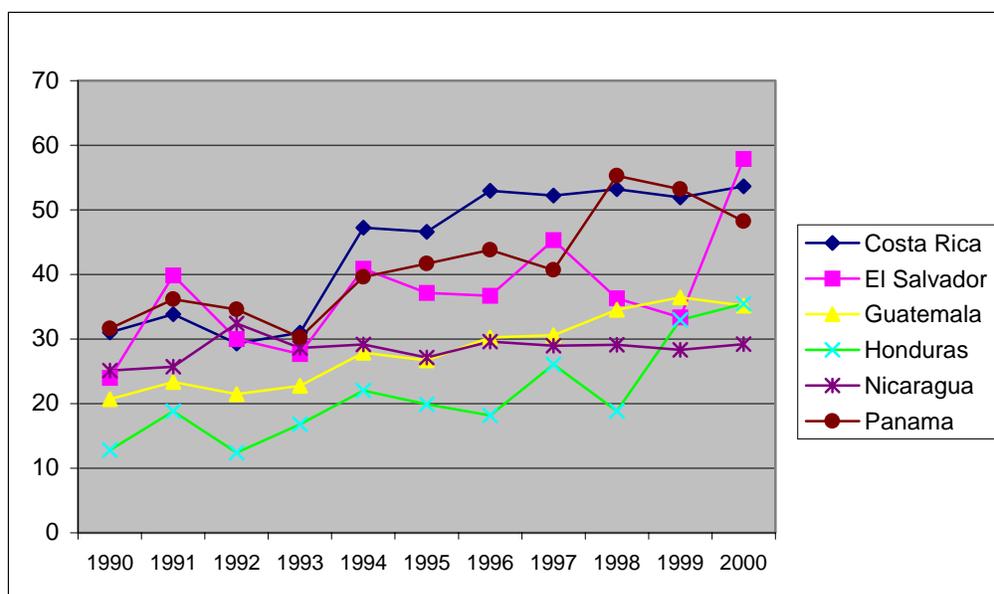
As well as having sufficient food to cover the needs at any given moment, it is also important that the supply should be stable. If in figure 3 we analyze the volatility of FNS by noting the number of times that FNS goes down compared with the previous period, we see that Costa Rica

and Honduras have the greatest stability, with an overall trend that does not display major positive or negative variations. Nicaragua registered a relatively large decline in the middle of the decade (3.8%), but it returned to its original levels in the last three years of the period. El Salvador and Panama display greater volatility, except for a couple of years, registering three-year cycles of growth and decline, with the supply dropping by as much as 9% in a single year. Guatemala shows the worst situation, with an ongoing decline that caused it to drop from second to last place in terms of aggregate supply, with an overall loss of 19% over ten years, equivalent to the whole of the progress made between 1970 and 1990.

In order to determine the degree of food autonomy or self-sufficiency of the countries, food imports were compared with the total energy stock existing in the country. It was found that in general there has been an upward trend in food imports between 1990 and 2000, with such imports increasing from between 12% and 30% of the total stock to between 29% and 58% (see figure 4).¹ El Salvador was the country with the greatest relative increase in imported calories during the decade, with a very marked increase towards the year 2000. It was followed by Costa Rica and Honduras, which registered a fairly stable trend over the decade. Nicaragua was the most stable country in this respect, since the relative weight of imports in its total food energy stocks increased only very slightly.

Analysis of the figures for the end of the decade (2000) shows that El Salvador, Costa Rica and Panama were the countries with the highest levels of food energy dependence, with proportions of between 48% and 58%. In Nicaragua, Honduras and Guatemala, in contrast, the proportions were only between 29% and 30%.

Figure 4
CENTRAL AMERICA (5 COUNTRIES) AND PANAMA: WEIGHT OF FOOD IMPORTS IN THE TOTAL ENERGY STOCK,^a 1990-2000
(Percentages)



Source: ECLAC, special processing of food balance sheets of the United Nations Food and Agriculture Organization (FAO).

Note: Total Stock = production + imports – exports, measured in kcal/person/day

¹ The total stock is equal to production, plus imports, less exports, measured in kilocalories/person/day. The implicit assumption of this indicator is that there are no significant differences between the proportions devoted to human consumption and other uses and between domestic production and imports.

A high level of dependence in terms of imported calories does not necessarily mean a high degree of external vulnerability, insofar as such imports do not represent a significant percentage of foreign exchange income. For the six countries analyzed, between 1994 and 2001 the value of food imports represented between a quarter and one-third of export income. Panama is the country where this proportion remained highest during the period in question, since only in 2001 did it go down by 40%, so that Panama was overtaken by El Salvador and Nicaragua and matched by Honduras in this respect. At the other extreme is Costa Rica, where this proportion remained between 5% and 11% during the last 11 years, thus generally showing a low degree of vulnerability. Guatemala is one step higher, with a proportion of around 20%, which meant that during the 1990s its FNS reflected a growing deficit in comparison with its needs.

Taking a long-term view, the *sustainability* of a food system is vital in order to ensure that the attainment of suitable levels of sufficiency, stability and autonomy does not involve a deterioration in natural resources. The main areas in which environmental problems that affect the food system arise are losses of arable land and phytogenetic varieties.

Although environmental deterioration in the agricultural areas of the Central American Isthmus shares some general features with other regions, the factors responsible for it are closely linked with the development style adopted by the sector in most of the countries, specifically the pattern of land occupation, the expansion of the agricultural frontier, and the resulting land ownership structure, as well as the lines followed in the process of agricultural modernization. Starting with an extremely unequal original pattern of agricultural land ownership, only partially modified by the subsequent agrarian reform processes, the land with the greatest agricultural potential stayed in the hands of a relatively small number of landowners, with, in some cases, the emergence of a number of high-capital medium-sized enterprises.

In this context, a partial and exclusive modernization process took place. It was partial because it only covered some regions, some producers and some products (especially export products and inputs for an agroindustrial sector with elastic levels of demand), and it was exclusive because it relegated a substantial proportion of small producers, especially of basic grains, to land of marginal quality. In many cases, this process gave rise to high concentrations of population in relatively small rural zones, leading to the progressive degradation of natural resources in such areas.

Another feature was the tendency to replace permanent labour with seasonal hands, giving rise, on the one hand, to processes of hyper-urbanization, rural stagnation, over-intensive use of fragile areas and pressures for deforestation, and on the other, to excessive use of fertilizers, over-mechanization, and inefficient water use in the modern agricultural sector.

d) The food system

A food system embraces the whole set of socio-economic and techno-productive relations that have a direct incidence on the processes of primary production, agroindustrial processing, storage, distribution, marketing and consumption of food products.

In Central America, the production units of the sector have a bimodal structure consisting of a huge peasant sector and a small business sector, with different degrees of mechanization. This type of structure needs forms of technology and incentives that take account of the differences in the logic behind the management of the different types of production units.

Rough estimates of the relative importance of the different types of production units in the subregion indicate that business agriculture generates around 60% of the production for domestic

consumption and rather more than two-thirds of that for export. In the cases of maize, beans and potatoes, however, most of the production seems to come from the peasant sector.

In recent years the Central American agricultural sector has been affected both by the behaviour of world agricultural product prices and by climatic phenomena which have substantially reduced production volumes, with direct consequences for family income and the supply of goods and jobs in the sector.

At the external level, the great abundance of exportable agricultural products and, in recent years, the weak demand for imports of these items have led to an increase in surpluses and a drop in the international prices of these products, especially basic grains. At the same time, the heavy inflow of external capital in the 1990s, which caused the appreciation of national currencies, has exposed agricultural producers to strong competition, adversely affecting production conditions and income.

Likewise, a succession of natural phenomena have shown how vulnerable the Central American agricultural sector is. Hurricane Mitch, whose effects are still reflected in the levels of credit arrears and the demand for reinvestment funds, was followed by two earthquakes in El Salvador early in 2001 and a drought which has affected all the countries of the region to a greater or lesser extent. Thus, between May and August 2001 – the period of greatest demand for water in the cultivation of basic grains – rainfall was below historical levels and below the water needs of agriculture, and it is estimated that over 18% of the expected production of the region was lost.

Table 1
CENTRAL AMERICA: ESTIMATED LOSSES IN BASIC GRAINS
CAUSED BY THE DROUGHT IN THE 2000-2001 CROP YEAR

Type of grain	Lost production (thousands of quintals)	Value of loss (millions of dollars)
Maize	7 058	62.4
Beans	930	21.9
Rice	1 241	13.5
Sorghum	1 341	8.8
Total	10 570	106.6

Source: ECLAC/CCAD, El impacto socioeconómico y ambiental de la sequía en 2001 en Centroamérica (LC/MEX/L.510), February, 2002.

These events further aggravated the difficult situation of agriculture in the region, which had already been affected by an unprecedented crisis in the coffee sector. The glut in world coffee production greatly increased stocks over the last five years, leading to a substantial fall in world market prices. It is estimated that in 2001 coffee exports brought in US\$ 713 million less than the average values for the 1994-1998 period (a loss equivalent to about 1.2% of the regional GDP for that year), declining from 16% of total exports of goods in the period in question to only 7% in the year 2001.

Finally, it should be borne in mind that agro-industry and agro-trade are the main guiding factors in the food system, not only because of their own inherent functions, but also because they have a significant influence on the rest of the system through their backward and forward linkages (with agricultural production and with final consumers, respectively).

In Central America, the agro-food industry is the sector with the greatest relative weight in manufacturing, since the food, beverages and tobacco branches account for a steady 46% of the total agroindustrial sector, although their share in exports has been declining.

Even before the appearance and spread of supermarkets, the marketing sector occupied a vital place in the food system because of its all-embracing presence, its incidence on consumer prices, and the fact that it is the last link in the supply chain and the starting point of the flow of information to producers, thus aiding in the adjustment between production and consumption.

Supermarkets developed along the same lines as their United States counterparts, but spread much faster. Starting with only a marginal share of the market, they are now an important force in the food market. Thus, for example, between 1994 and 2001 their share grew from 15% to 34% in Guatemala, and over the last decade it grew to 50% in Costa Rica and 37% in El Salvador. With the growing influence of the supermarkets, from being merely a source of information the sector has increasingly become the control point in the evolution of food systems.

e) Food policy

It has been noted that the objective of food policy is to help overcome the food insecurity of the population: in other words, to ensure that every person, at all times, has physical and economic access to sufficient safe and nutritional food to satisfy his or her nutritional needs and food preferences so as to lead a healthy and active life.

In the region, food and nutritional security policies have the task of complementing and correcting the effects of the main macroeconomic variables on the access to and availability of food, as a function of fiscal, monetary and credit, wage and external trade policies. It is these policies which ultimately determine the relative prices of foodstuffs, influence the rural-urban terms of trade, and finally affect the purchasing power of consumers. Structural reforms and external openness policies have been gradually reducing the ability of public policies to influence food supply patterns because, for better or worse, many of the instruments of the past, such as subsidies, differential exchange rates, exemptions, special purchasing policies by State enterprises, and the fixing of prices for staple products have practically disappeared and sectoral policies have been subordinated to the achievement of macroeconomic balance. In contrast, the private agents in the last links of the food production and distribution chains – such as the supermarkets -- have come to play an increasingly important role in deciding what is produced for household consumption, how, and by whom.

Policy measures at the *macro level* are linked on the one hand with the macroeconomic variables themselves, and on the other with aspects relating to the regulation and stimulation of the way the main private agents in the food system behave. They are generally measures aimed at reallocating resources to improve access to and availability of food, and are expressed through:

- (i) the relative weight and structure of social expenditure in the budget;
- (ii) the lines followed by investment in infrastructure;
- (iii) the fiscal incentives or transfers aimed at furthering the reorganization of the food production and distribution structures;
- (iv) the incentives for the dissemination of technical progress in the various spheres of activity that make up the food system;
- (v) redefinition of the form of insertion in the international economy with regard to the aspects that affect food supply and demand (price bands, protection against dumping, and the criteria used to regulate the distorting effects of food aid; and
- (vi) the establishment of regulations and standards governing the quality and safety of foodstuffs.

At the *meso level*, the most important factors are the territorial rural development policies adopted for food and nutritional security (TRD-FNS policies), which take as their starting point, or, if preferred, are structured around local development policies, which will be of an eminently rural nature in view of the countries' characteristics. TRD-FNS policies view food and nutritional security as the backbone both of the changes in production patterns and changes in the institutional architecture of a given space. Such a space becomes a territory when the agents of change consider this to be necessary for containing and delimiting the relations among them within the space and the relations between all those concerned and the "outside world", as a function of the development projects and objectives it is planned to pursue.

Policy at the *micro level* fundamentally means those measures which directly affect families or persons. This is the area in which the greatest progress has been made and in which valuable experience has been accumulated over many decades, especially that developed and promoted by INCAP (the Institute of Nutrition for Central America and Panama) and the World Food Programme. What is therefore needed in this respect is to carry out a rigorous process of systematization which will make it possible to draw up a compendium of the lessons learned, in order to strengthen the micro policies for food and nutritional security.

All the Central American countries have policy-making bodies at the central level which are responsible for dealing with this matter and drawing up a plan of action, and in almost all cases there are national policies in this respect. There are three countries in the subregion where there is some degree of legally guaranteed security (through laws or draft legislation): Costa Rica, Guatemala and Nicaragua.

In these circumstances, the countries of the subregion display a positive state of affairs as regards the level of political importance and legal security assigned to the food and nutritional system. At the same time, however, "... even though most of the policies and plans have been drawn up in the light of the availability, access to, consumption and biological utilization of food, emphasis is placed on biological utilization and consumption" "In practice, in many cases the coordination links are not as coherent as is necessary, especially in the case of production and access policies, and it is necessary to take account of macroeconomic policy, globalization, inter-regional trade and the processes of modernization and decentralization of the State in order for the plans to take a more realistic approach and be politically viable and technically and economically feasible" (INCAP, 2003).

The application of FNS policies calls for the participation of a number of actors: government institutions (the central government, departments and municipalities), bilateral and international cooperation organizations, banks, national and foreign NGOs, and the community itself.

Taking a global stance, the role of government institutions is to define policy and design programmes: a task in which they receive strong support from international agencies (WFP, FAO, INCAP, UNICEF, SICA) and donor countries. Finance for food comes partly from national budgets, banks (BCIE, World Bank and the IDB), and to a substantial extent from contributions by donor countries and agencies (mainly the WFP and USAID).² National and international NGOs aid in the execution of operational tasks.

f) Food aid in Central America

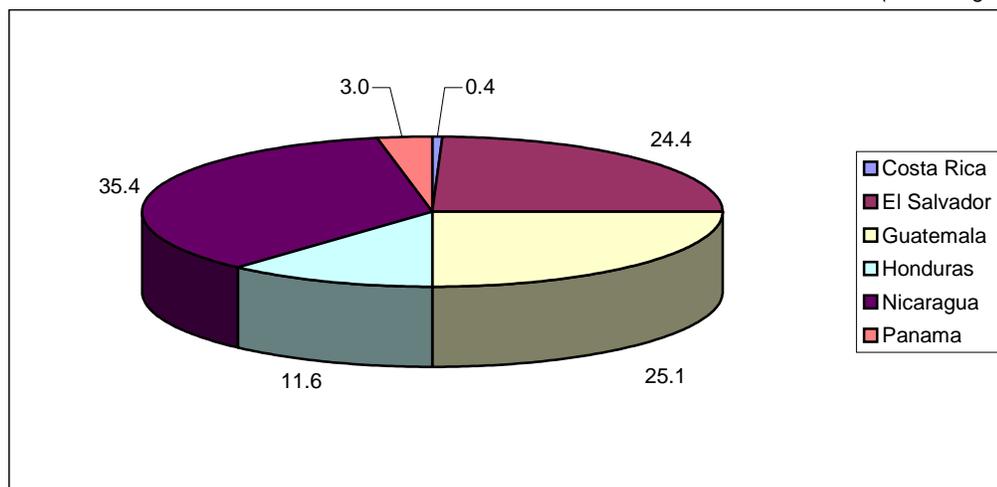
As regards food aid programmes engaging in the distribution of food rations and the provision of subsidies, training and technical assistance, these operate in the region with extensive participation by national and foreign public and private actors. The forms of coordination vary in each case, ranging from almost complete autonomy – sometimes even involving some aspects of competition – to full interaction and mutual dependence.

² BCIE: Central American Bank for Economic Integration
IDB: Inter-American Development Bank
USAID: The United States Agency for International Development.

Each country's experience is different: some operate in connection with regional programmes while others work independently. There are similarities, however, in that they include nutrition programmes for schoolchildren, children in general and expectant and nursing mothers and community support for rural producers.

International cooperation has been a very important element in food policy and has taken different forms: integration with national policies and support for autonomous actions. According to the FAO, between 1990 and 2001 the volume of such aid fluctuated considerably, with volumes ranging between 33 million tons (in 1995) and 112 million tons in 1991. Of the 885 million tons distributed over this period, Nicaragua was the country that received most food, followed by Guatemala and El Salvador.

Figure 5
DISTRIBUTION OF FOOD AID IN CENTRAL AMERICA AND PANAMA: AVERAGE 1990-2001
(Percentages)



Source: United Nations Food and Agriculture Organization (FAO), FAOSTAT Nutrition.

Obtaining funds and food, as well as detecting problems, deciding on the priority status of beneficiaries and distributing the aid, calls for the coordination of various areas of management, with the participation of many different organizations. Outstanding among the regional bodies collaborating in the provision of food aid in Central America are:

- The Institute of Nutrition for Central America and Panama (INCAP/PAHO).
- PAHO (Pan-American Health Organization), in the initiative to establish Health Promotion Schools or "Healthy Schools".
- The Inter-American Agricultural Cooperation Institute (IICA).
- The FAO Special Programme for Food Security (PESA).
- The Technical Cooperation Network on Food and Nutrition Monitoring Systems (SISVAN).
- The International Fund for Agricultural Development (IFAD).
- The Central American Integration System (SICA).
- The Coordination Centre for the Prevention of Natural Disasters in Central America (CEPRENAC).
- The Regional Office of the World Food Programme (WFP).

This latter element highlights the need for international aid to give priority to those Central American countries. This aid must be integrated into public policies to address the essential elements making up a national food policy. As well as making possible access to food by the whole population, such national policies must be designed to ensure the sufficiency, stability, autonomy and sustainability of the country's food supply and must be reflected in simultaneous action on three fronts:

- i) Structural actions with medium- and long-term effects (literacy programmes, access to land, modernization of agricultural production, improvement of food distribution channels, etc.);
- ii) Measures to increase the capacity of households to acquire food and make proper use of it, through short- and medium-term initiatives (projects and programmes for income transfers, school meals, educational campaigns on eating habits, etc.), and
- iii) Shorter-term preventive and emergency actions to avoid the consequences of critical situations affecting access to food and alleviate their effects (direct distribution of food to persons affected by natural disasters and the implementation of food security monitoring systems focused on vulnerable localities and population groups).

Introduction

Concern over food security problems has existed for several decades, but especially since the International Conference on Nutrition (Rome, 1992) and the World Food Summit (Rome, 1996) that concern has come to be reflected in the formulation of national food and nutritional security policies.

As a consequence of the world food market crisis in 1972-1974, the concept of food security began to be present on the agendas of international meetings, in conjunction with the problems of availability being faced by the food deficit countries due to that crisis, since even the most solidly based analyses, including that of the United States Department of Agriculture, considered that a prolonged period of shortage and high prices was about to begin. No-one foresaw, however, that the world market would pass from a crisis of shortages to one of over-production, which restored the long-standing trend towards a decline in the prices of the main food products, albeit now in a context of marked instability.

When it was observed that a sufficient or more than sufficient level of aggregate availability nevertheless did not guarantee universal access to minimum standards of nutrition, there was a tendency to broaden the concept, emphasizing the problems of food insecurity at the family or individual level.³ Thus, at its twelfth World Conference the FAO proposed a broader concept of food security which incorporated its various different dimensions. "The final objective of food security is to ensure that all persons, at all times, have

³ An extreme case of this type of situation was analyzed by Sen (1982), who showed that many famine situations existed side by side with exports of food from the affected countries.

physical and economic access to the basic foods they need food security must have three specific aims: to ensure adequate production of food, to achieve maximum stability of food flows, and to guarantee access to the available food by those who need it” (FAO, 1983a).

In the case of Central America, various forms of support have been given to this item in recent years, including in particular:

- In 1991 the Council of Central American Ministers of Health (COMISCA) and the Regional Commission on Social Affairs (CRAS) were set up.
- In 1993 the Social Integration Subsystem of the Central American Integration System (SISCA/SICA) was formed.
- At the Fourteenth Summit Meeting of Central American Presidents (Guatemala, 1993), the Regional Food and Nutritional Security Initiative was adopted. This was proposed by the Institute of Nutrition of Central America and Panama and the Pan-American Health Organization (INCAP/PAHO), which defined food security as “..... a situation in which all persons enjoy timely and permanent physical, economic and social access to the amount and quality of food they require for their adequate consumption and biological utilization, thus guaranteeing them a state of general well-being which will further their development”. This definition came to be the general framework for the political implementation of that Initiative in the Central American Isthmus.
- At the 1996 World Food Summit, the countries of the region pledged “..... our political will and our common and national commitment to achieving food security for all and to an ongoing effort to eradicate hunger in all countries, with an immediate view to reducing the number of undernourished people to half their present level no later than 2015”.
- The most recent references in this connection are the mandates of the Summit of Iberoamerican Presidents held in December 2002, which included the adoption of a Strategic Framework prepared by the Central American Agricultural Council (CAC) to deal with the situation of food and nutritional insecurity associated with drought and climate change. This Framework includes, inter alia, a regional food insurance system or regional contingency fund, a regional emergency team to deal with the food crisis in Central America, and a policy of organization and optimization of social investment for food and nutritional security and the reduction of acute undernutrition and poverty (Morgado, 2003).⁴

The challenge is obviously an important one, since it places the problem of food security at the highest political level. The questions that spring to mind in this connection are how far the objectives are being reached and what are the causes and consequences of the situation existing among the Central American countries.

In order to find and disseminate some of the answers to these questions, early in 2003 the Regional Office of the World Food Programme (WFP) and the Economic Commission for Latin America and the Caribbean (ECLAC) signed a three-year cooperation agreement providing among other things for the preparation of a special chapter on hunger, malnutrition and poverty in the *Social Panorama of Latin America 2002-2003* and three annual reports analyzing this issue in groups of countries. The first of these reports covers the Central American subregion, and its results are presented in the present document.

⁴ Presentation made at the Working Meeting on “Organization and optimization of international technical and financial cooperation in the light of the resurgence of acute food and nutritional insecurity in Central America”, INCAP, Guatemala, June 2003.

This report seeks to give some answers to the questions referred to above and to discuss some possible scenarios. Chapter A gives an analysis of the relations between poverty, hunger and malnutrition in the Central American countries in the present circumstances and a projection of their likelihood of reaching the Millennium Development Goals regarding hunger and poverty. Chapter B describes the components of food insecurity and the way they manifest themselves in the subregion. Chapter C contains an analysis of food systems, with special reference to the characteristics of food producers and marketers. Chapter D presents the central elements of food and nutrition policies and the way these policies are currently being implemented in the region. Chapter E is a compilation of the main food aid programmes at the national level and the experience accumulated in horizontal coordination and international aid. Finally, a statistical appendix is given in which the main data on which this report is based can be reviewed.

A. Food and Hunger and the Millennium Goals

In Central America, as in the rest of Latin America and the Caribbean, food insecurity and hunger are phenomena which are closely associated with extreme poverty, but with specific characteristics. Deficient feeding is something that affects not only those living in conditions of extreme poverty but also broader population strata and groups living in certain areas or regions where there is permanent food insecurity (ECLAC, 2003).

The special nature of the problem of hunger with respect to poverty was clearly expressed in the Millennium Declaration, which lays down separate goals for the reduction of both these scourges by 50% no later than 2015, with separate groups of indicators.

In this context, the question that arises is the form that these two problems take in the Central American countries as compared with the other countries of Latin America and the Caribbean and the degree of progress achieved and future projections of the degree of fulfillment of the Millennium Goals.

1. Hunger and extreme poverty in Central America

The empirical evidence indicates that extreme poverty and hunger are closely related, but they are not phenomena that can be assimilated with each other, since some of the population affected by malnutrition do not form part of the poorest stratum, while on the

other hand not all the very low income population display the most acute consequences of lack of food.

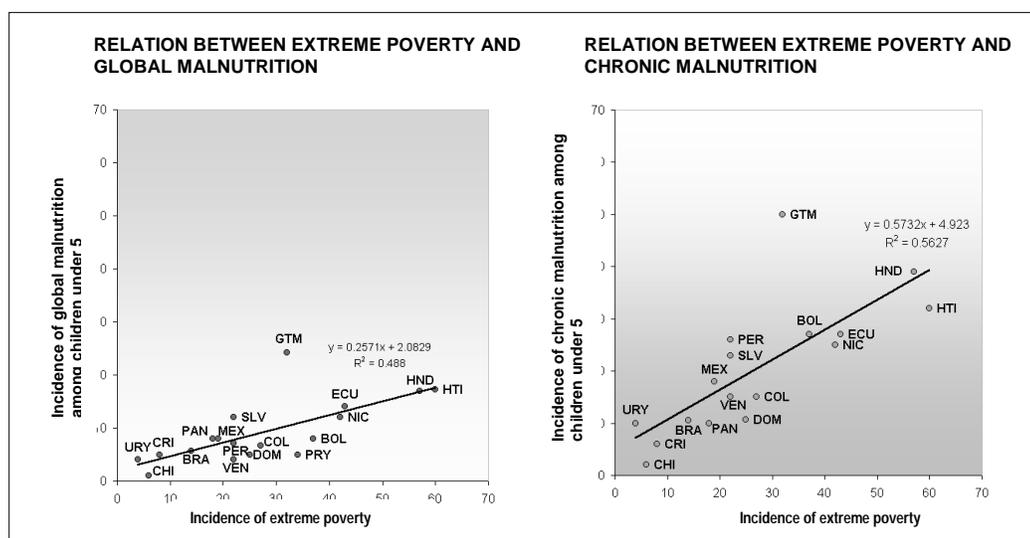
From the social policy standpoint, although measures to combat extreme poverty are an important part of the campaign to reduce hunger, such measures alone cannot be expected to ensure the eradication within a reasonable space of time of hunger and of its main consequence, child malnutrition. On the other hand, it is possible to secure significant achievements in terms of the reduction of malnutrition through nutrition programmes, even when these do not form part of broad-ranging and costly anti-poverty programmes.

The incidence of extreme poverty explains about half of the differences in the incidence of malnutrition in the countries in question. Thus, 49% of the differences in global undernutrition rates (low weight for age) and 57% of the differences in moderate to serious chronic undernutrition (low height for age) among the countries are attributable to differences in the incidence of extreme poverty.

It may be seen from the figures presented below that the shortage of resources in Latin American and Caribbean households is far from accounting alone for the levels of child malnutrition observed. For example, although El Salvador and Nicaragua have very different levels of poverty, they have similar levels of chronic malnutrition. Likewise, although Guatemala has a similar level of extreme poverty to that of Colombia, the levels of chronic malnutrition are very different. The same is true of malnutrition as reflected in weight deficit.

Figure 6

LATIN AMERICA AND THE CARIBBEAN (18 COUNTRIES): RELATION BETWEEN EXTREME POVERTY,^{a/} GLOBAL MALNUTRITION AND CHRONIC MALNUTRITION, AROUND 1999



Source: **Extreme poverty:** ECLAC, *Social Panorama of Latin America 2001-2002*. **Global Malnutrition** (moderate to severe weight-for-age deficiency): United Nations Children's Fund (UNICEF), *The State of the World's Children 2003*. **Chronic Malnutrition:** ¿Está disminuyendo la malnutrición? Análisis de la evolución del nivel de malnutrición infantil desde 1980, Mercedes de Onis, Edward A. Frongillo and Monika Blössner, *Boletín de la Organización Mundial de la Salud, Collected Articles N° 4*, 2001.

Note: ^(a) The figures on the incidence of extreme poverty are ECLAC estimates and correspond to the measurements closest to 1999.

Another way of analyzing this association is to compare the data at the individual level, on the basis of demographic and health surveys (DHS). With regard to the situation in Central

America, there are two surveys which give estimates of these two variables together (Guatemala, 1995 and Nicaragua, 1998), and these were used to try to estimate the extent to which the most extreme manifestation of hunger – child malnutrition – is associated with or determined by insufficient income of the population and other factors associated with poverty.

As may be seen from figure 6, in the countries in question this association is far from being perfect or even very marked. On the one hand, a very high proportion of the child population (over two-thirds) living in households in a state of extreme poverty do not suffer from low weight for age, while on the other, a very high proportion of children under 5 suffering from malnutrition as reflected in weight deficit do not live in extremely poor households, and many of them even live in households which are above the poverty line. Thus, if the resources for combating malnutrition had been concentrated on extremely poor households, this would have meant failing to aid 56% of undernourished children in Guatemala and 42% in Nicaragua.

Table 2
**CENTRAL AMERICA (22 COUNTRIES): RELATION BETWEEN CLASSES
OF POVERTY AND INCIDENCE OF GLOBAL MALNUTRITION⁵**

GUATEMALA, 1995					
	Extremely poor	Not extremely poor	Not poor	Total	Incidence of extreme poverty
Undernourished	12	9	6	27	44
Not undernourished	23	18	32	73	32
Total	35	27	38	100	35
Rate of malnutrition	34	33	16	27	
NICARAGUA, 1998					
	Extremely poor	Not extremely poor	Not poor	Total	Incidence of extreme poverty
Undernourished	7	3	2	12	58
Not undernourished	35	27	25	88	40
Total	43	31	27	100	43
Rate of malnutrition	16	10	7	12	

Source: Demographic and Health Survey (DHS) 1998.

It may be seen from the foregoing that there would appear to be a set of protective or compensatory factors which account for these results.⁶ These include mechanisms of biological and metabolic adaptation to low levels of food intake and mechanisms involving the adaptation of conduct, which are often reflected in reduction in physical activity and performance (James and Schofield, 1990). In addition, there are others which make it possible to compensate to some extent for the effects of poverty, through the intra-family distribution of food to the benefit of children at the expense of their mothers, and the social networks in which poor households take part, which allow them to alleviate the most extreme situations of lack of access to food.

In view of the foregoing, the problems of hunger and food insecurity need to be analyzed as phenomena which are important in themselves, and not just as appendices or sub-components of extreme poverty.

⁵ It refers to the considered moderate-grave insufficiency.

⁶ In a recent PowerPoint presentation by Paes de Barros and others, the relation between extreme poverty and hunger in Brazil is analyzed, together with various hypotheses which could account for the low degree of association between the corresponding indicators.

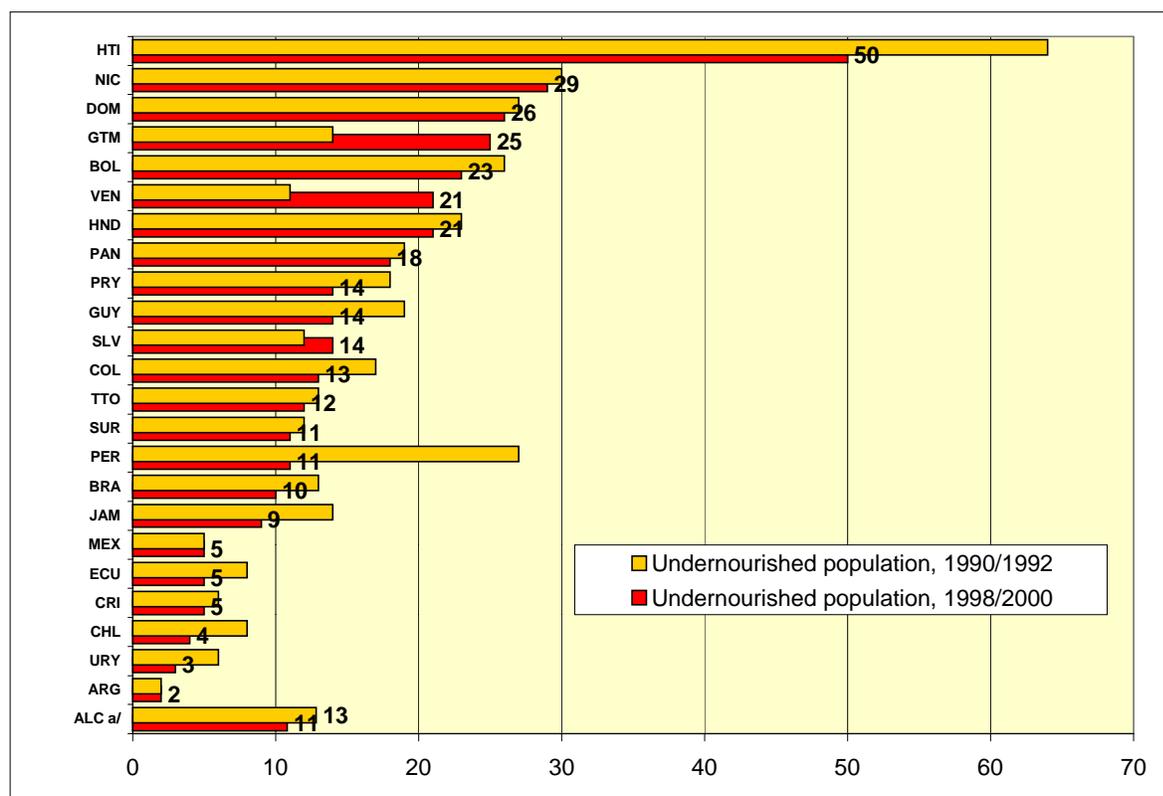
2. Hunger and food insecurity in Latin America and the Caribbean⁷

Around the year 2000, the proportion of the Latin American and Caribbean population in a situation of extreme poverty amounted to 18.5% of the total, while the undernourished population came to 11% (nearly 54 million persons) and almost 8% of all children under 5 suffered from low weight for age. Although these figures are less dramatic than those for other developing regions, the use of stricter indicators reveals a more serious situation: almost 22% of the population suffered from undernutrition in terms of the average calorie requirements of the population, and almost 21% of the children suffered from moderate to serious chronic undernutrition.

The differences between countries are quite marked: the FAO estimates of undernutrition indicate that in seven countries more than 20% of the population suffer from hunger, whereas in six other countries no more than 5% of the population is in this situation. Among the seven countries with the highest incidence of hunger, three are in Central America (Guatemala, Honduras and Nicaragua).

Figure 7

LATIN AMERICA AND THE CARIBBEAN (23 COUNTRIES): EVOLUTION OF PERCENTAGE OF POPULATION SUFFERING FROM UNDERNUTRITION BETWEEN 1990-1992 AND 1998-2000



Source: FAO, The State of Food Insecurity in the World 2002 (<http://www.fao.org/docrep/005/y7352e/y7352e00.htm>).

Note: Latin America and the Caribbean: weighted average of the countries.

Twenty of the 23 Latin American and Caribbean countries managed to reduce the proportion of the population suffering from undernutrition in the 1990s (see figure 7). In most of them, an increase in the per capita internal availability of food was the main factor in this, making up for the increase (only slight in most cases) in inequality of access to food. It may be noted that among the countries where there was an increase in the incidence of undernutrition, two of them are Central

⁷ Taken from the ECLAC *Social Panorama of Latin America 2002-2003*.

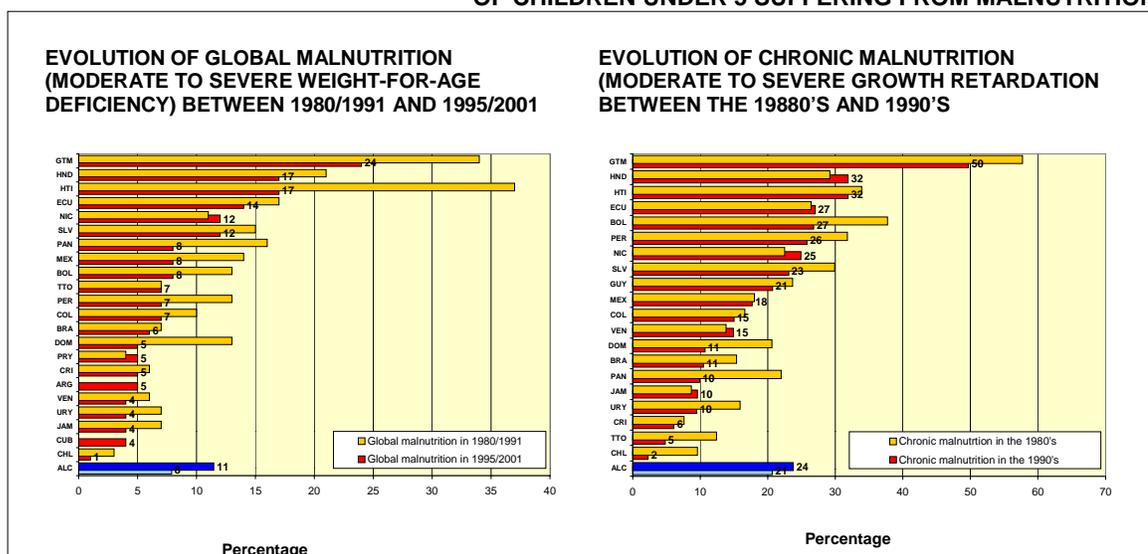
American (El Salvador and Guatemala). This appears to have been due mainly to a reduction in the per capita supply of food as a result of declines in domestic production and in import capacity.

Apart from insufficient availability of food, child malnutrition is usually also affected by other factors related with extreme poverty, such as lack of access to drinking water and sanitation, which is reflected in infectious diseases and diarrhea which, in turn, result in rapid loss of weight. In most of the countries of the region, however, the most usual expression of hunger and poverty among children is chronic undernutrition (moderate to serious deficits in height for age, or retarded growth). These deficiencies are serious because they represent the accumulated effect of lack of adequate food and nutrition during the most critical years of a child's development, so that their ill effects are largely irreversible. They are one of the main mechanisms for the intergenerational transmission of poverty and inequality.

Over the last decade, weight-for-age deficit, which is the indicator used for following up progress towards attainment of the target on hunger laid down in the Millennium Declaration, is estimated to have gone down from around 13-14% to 8-9%, while chronic undernutrition in the region went down on average from around 23-24% to 18-19%.

Figure 8

LATIN AMERICA AND THE CARIBBEAN (22 COUNTRIES): EVOLUTION OF THE PERCENTAGE OF CHILDREN UNDER 5 SUFFERING FROM MALNUTRITION



Source: **Weight deficiency:** United Nations Children's Fund (UNICEF), *The State of the World's Children 1993* and *The State of the World's Children 2003* <http://www.unicef.org/sowc03/tables/table2.html>). **Chronic malnutrition:** ¿Está disminuyendo la malnutrición? Análisis de la evolución del nivel de malnutrición infantil desde 1980, Mercedes de Onis, Edward A. Frongillo and Monika Blössner, *Boletín de la Organización Mundial de la Salud, Collected Articles N° 4*, 2001.

Note: Latin America and the Caribbean: weighted average for 22 countries.

It may be seen from the above figure that the incidence of retarded growth continues to be very high in a number of countries: in nine of them it affects over 20% of children under 5, and four of those countries are in Central America (El Salvador, Guatemala, Honduras and Nicaragua). In contrast, Costa Rica is at the other extreme, figuring among the three countries where this incidence is 5% or less.

On the one hand, this reflects the greater capacity of the countries to cope, with their own resources and with outside aid, with the most critical hunger situations due to emergencies such as droughts, floods and hurricanes, but on the other it highlights the difficulties in making faster

progress towards reducing child undernutrition in households that form part of the hard core of poverty.

3. Progress towards attainment of the Millennium Goals

As the following table shows, four Latin American countries appear to be unlikely to be able to fulfill the goal of reducing the 1990 levels of child malnutrition and undernutrition by half by the year 2015, and all of them are Central American (El Salvador, Guatemala, Honduras and Nicaragua). Panama would be able to fulfill the goal in part, since it would fail to meet the goal in respect of undernutrition but would more than meet that regarding child malnutrition.

In analyzing the situation of the 22 countries of Latin America and the Caribbean, the hypotheses suggested by the FAO were taken into account. These assume a greater increase in the food energy supply in the countries with the smallest supply than in the other countries: an increase of nearly 11% in the case of countries with an energy supply of 2,200 kilocalories or less, 9% in the case of those with a supply of between 2,200 and 2,500 kilocalories, and an increase of nearly 8% for those currently having a supply of over 2,500 kilocalories per person per day. These increases roughly coincide with the increases registered in the decade when the region performed best in this respect (the 1970s).

With regard to inequality of access, it was assumed that in the coming years the countries will achieve a relatively small reduction in the coefficient of variability of food consumption, as a result of the probable reduction of extreme poverty. Progress towards this goal would mean a relatively greater increase in food consumption by the poorest sectors of the population, as compared with the middle- and high-income sectors. The FAO suggests that the present range of values of the coefficient of variability of food consumption could go down from values of between 0.21 and 0.36 to a range between 0.20 and 0.31 by 2015. On this basis, and bearing in mind the persistence of inequality in the region and the slow progress being made in the reduction of absolute poverty, a uniform 5% reduction in this coefficient was projected.⁸ The rates of undernutrition projected to 2015 also took into account a change in the minimum energy requirements. A 1.3% increase was assumed in this respect, since the FAO estimated that population ageing would raise the requirements by 2.6% by 2030 (FAO, 2002a).

With regard to child malnutrition, the situation is more favourable, although it is worth stressing once again that this is the most extreme manifestation of hunger, at least in terms of the way it contributes to its intergenerational transmission. In this respect, 18 of the 22 countries would reach the goal, whereas the other 4 (El Salvador, Guatemala, Honduras and Nicaragua) would not do so if they maintain the rates of progress registered in the last 15 years. Once again, it is the four Central American countries with the highest levels of poverty and food insecurity which will have to make a bigger effort in this field, and clearly a substantial part of international aid within the region should be assigned to them.

⁸ For example, a country with a food consumption variability coefficient of 0.32 would bring it down to 0.30.

Table 3

LATIN AMERICA AND THE CARIBBEAN (22 COUNTRIES): PROJECTED FULFILLMENT OF THE MILLENNIUM GOAL ON HUNGER (HALVING THE 1990 LEVELS OF UNDERNUTRITION AND GLOBAL MALNUTRITION AMONG CHILDREN UNDER 5 BY THE YEAR 2015)

		Child malnutrition (moderate to severe weight-for-age deficiency)		
		Will not fulfill Millennium Goal	Will fulfill Millennium Goal	Will fulfill more demanding goal based on goal set at the 1990 World Summit on Children
Undernutrition	Will not fulfill Millennium Goal	El Salvador Guatemala Honduras Nicaragua	Venezuela Trinidad and Tobago Haiti	Panama Dominican Republic
	Will fulfill Millennium Goal		Bolivia Brasil Colombia Mexico Paraguay	Costa Rica
	Will fulfill more demanding goal based on goal set at the 1990 World Summit on Children		Ecuador Guyana Peru	Argentina Chile Jamaica Uruguay

Source: ECLAC, on the basis of FAO projection criteria.

A distinctive feature of hunger in Central America (as also in the rest of the region) is the pronounced inequality of access to food, which on average is the highest of all the regions of the world. This situation means that a certain proportion of the population does not have access to the food they need because of their lack of resources, and not because of a shortage of food in itself.

As may be seen from figure 9, reduction of the disparities in access to food between geographical areas and population income strata is the main means whereby these countries could attain the goal laid down in the Declaration. If in the coming years (up to 2015) the current high level of inequality in access to food in these countries could be brought down to a level similar to that currently registered in Costa Rica, three of them (El Salvador, Honduras and Nicaragua) would be able to reach the goal set in terms of reduction of undernutrition. Only Guatemala would fail to reach it, although even there such a reduction in inequality would make it possible to bring the percentage of the population suffering from undernutrition below the level of the early 1990s. This indicates that in Guatemala the determining factor in its problems of food insecurity is the very low level of domestic supply of food, aggravated by inequality of access.

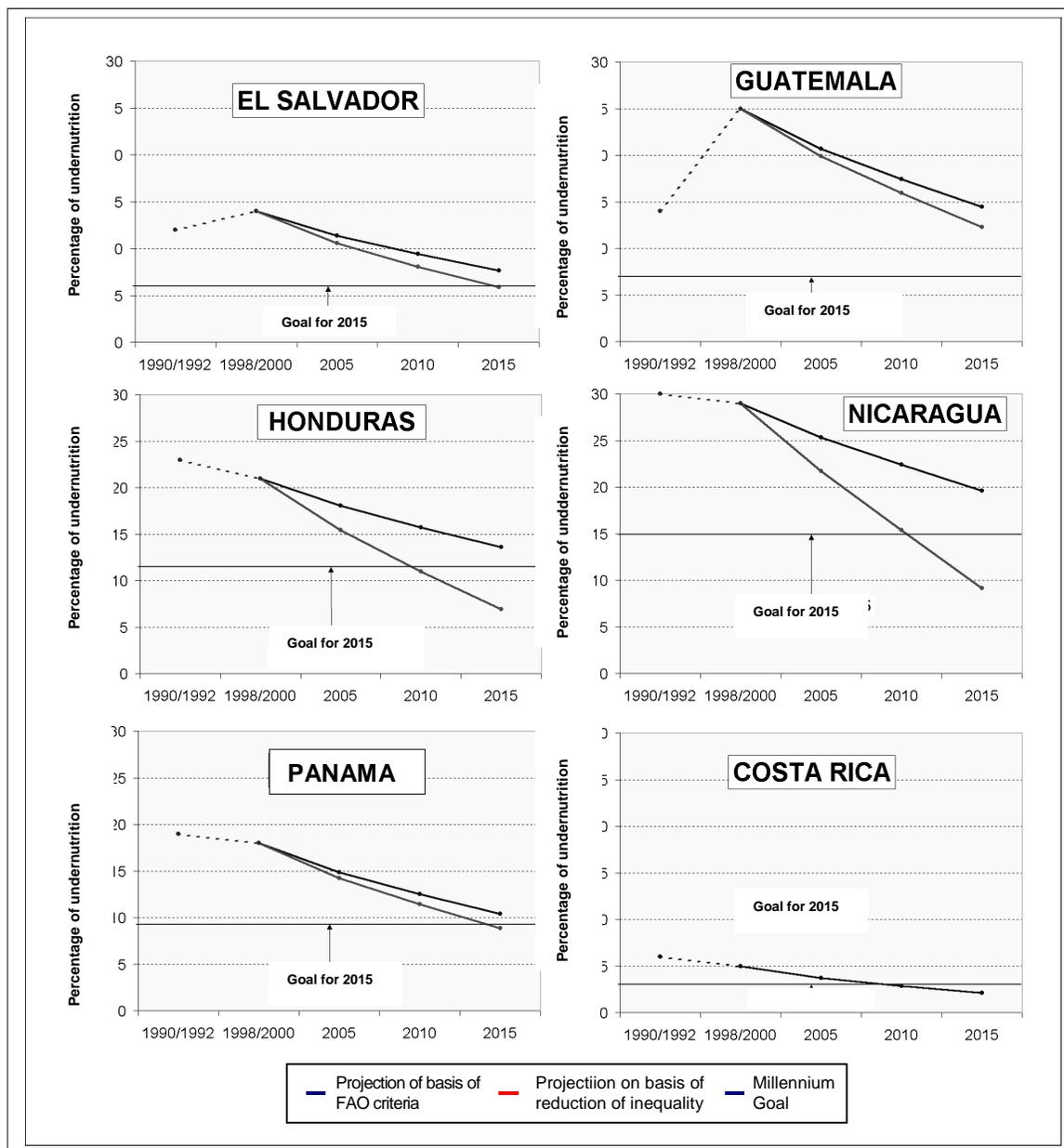
The foregoing highlights the need for international aid to give priority to these Central American countries. This aid should be integrated into public policies in order to address the essential elements of a national food policy. As well as giving the entire population access to food, such a national policy should aim to ensure the sufficiency, stability, autonomy and sustainability of the country's food supply and should translate into simultaneous actions on three fronts:

- i) structural measures with medium- and long-term effects (literacy campaigns, access to land, modernization of agricultural production, improvement of food distribution channels, etc.;
- ii) measures to increase the purchasing power of households so that they have access to food and use it properly, through short- and medium-term initiatives such as income transfer and school meal projects and programmes and educational campaigns on eating habits;
- iii) shorter-term preventive and emergency actions to avoid or alleviate the negative consequences of critical situations regarding access to food (direct distribution of food to

population groups affected by natural disasters and the implementation of food security monitoring systems focused on vulnerable localities and population groups).

Figure 9

PROJECTED UNDERNUTRITION IN FIVE CENTRAL AMERICAN COUNTRIES AND PANAMA ACCORDING TO THE FAO CRITERIA, AND REDUCTION OF INEQUALITY IN FOOD ACCESS TO THE PRESENT LEVELS OF COSTA RICA, BY THE YEARS 2005, 2010 AND 2015



Source: ECLAC projections of levels of undernutrition on the basis of hypotheses of the United Nations Food and Agriculture Organization (FAO) on the evolution of the supply of food energy, minimum nutritional requirements and the coefficient of variability of access to food consumption. The second projection includes the criterion of reduction of the coefficient of variability to the present levels of Costa Rica (0.25).

B. Food insecurity

1. Aggregate availability problems

The definition of food and nutritional security (FNS) involves four types of manifestations of food problems: two concern aggregate availability or domestic supply, and two refer to problems of family or individual access. Apart from their obvious inter-relations, they are due to different causes and therefore call for different policies in order to overcome them.

a) Aggregate availability problems

These correspond to situations where there is a discrepancy between the evolution of demand and that of aggregate supply. Depending on how long they persist, they are known as structural or temporary problems.

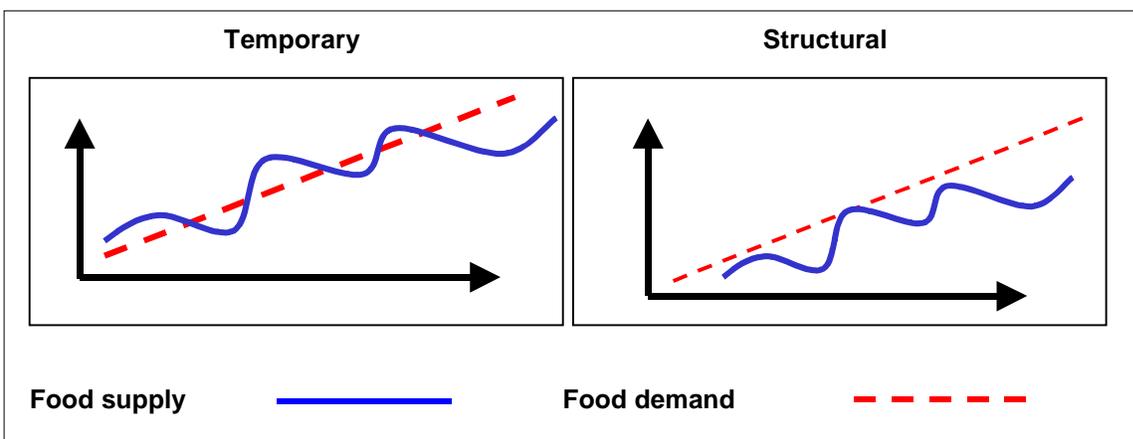
Structural problems refer to cases where the discrepancy is persistent. Among them are policies that discriminate against agriculture and food production, the deterioration of production potential (due to salinification, erosion, desertification, etc.), deterioration of the terms of trade or the capacity to import food, the presence of bottlenecks, and deterioration in the road, port and warehousing infrastructure.

The solution of these problems is a medium- to long-term matter and often calls for changes in the production structure of the agricultural and food sector, in the structure of distribution systems, in

food and nutritional monitoring systems, and the abandonment of urban-industrial bias in public policies.

Temporary problems arise when there are cyclical maladjustments between the levels of production and/or supply and aggregate demand. These problems can be the result of climatic instability, pests or diseases, fluctuations in food prices, temporary falls in import capacity, strikes, boycotts, etc. Overcoming them calls for improvements in information and early warning systems, storage infrastructure and policies, the prediction of losses due to pests and diseases, post-harvesting practices, import management and price stabilization policies (e.g., the application of price bands).

Figure 10
AGGREGATE AVAILABILITY PROBLEMS



Source: Prepared by the authors.

b) Problems of individual or family access to food

These problems reflect disparities or limitations that affect the utilization of food by an individual or family.

Structural access problems reflect a gap between the basic food needs of a family and the income available for acquiring food or – in a stricter sense – chronic insufficiency of “food access rights”.⁹

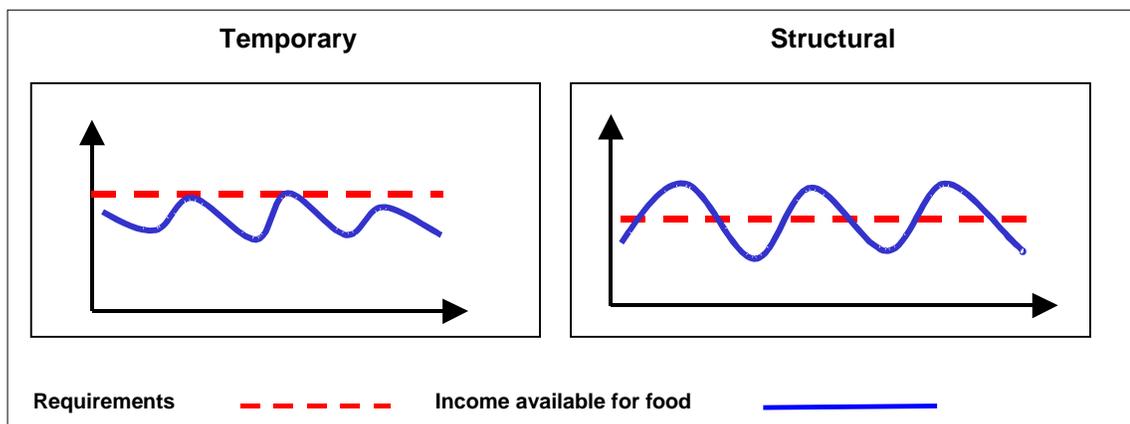
In the rural sector, these problems may arise as a result of processes of fragmentation of small holdings; loss of fertility of land due to over-exploitation; decline of peasant agriculture without the absorption of the surplus labour into other activities; diseases that result in loss of assets, etc. In the urban sector, they may arise due to a prolonged higher upward trend in the prices of staple foods than in wages, chronic unemployment without any compensatory social security, migration, illiteracy, abandonment of the family by the head of household, health problems, old age, etc. This is the most serious of all the food security problems, and when it exists on a massive scale it can only be tackled at the level of food policy itself.

Temporary access problems involve occasional difficulties (whether or not on a regular basis) by some families in satisfying their basic nutritional requirements, and they may be the result of the phenomena described in the previous paragraph or such factors as poor harvests not compensated for by better prices, seasonal fluctuations in prices, temporary unemployment, strikes

⁹ These correspond to what Sen (1982) defines as food entitlements, and may depend on the regular or other income of the persons involved.

involving the head of family, wages that lag behind inflation, migrations and sickness. When they are prolonged or result in a loss of assets (as for example through the need to sell animals to cover health expenses) they can become chronic or structural problems.

Figure 11
FAMILY ACCESS PROBLEMS



Source: Prepared by the authors.

2. Aggregate availability problems in Central America and Panama

For diagnostic and policy purposes, in dealing with aggregate availability problems it is necessary to distinguish between those concerning the capability of domestic supply to satisfy socially desirable levels of demand by the population in question, the stability of that supply over time, its degree of autonomy or self-sufficiency (or, in contrast, its degree of external dependence), the long-term sustainability of those conditions, and the quality and safety of the food.

a) Levels of sufficiency

A sufficient food supply is one which is capable of satisfying both the existing effective demand and the basic food needs of the sectors which are not able to translate their needs into market demand because of income problems. Traditionally, the analysis of sufficiency has been based on calculation of the daily food energy supply (FES)¹⁰ of a country, using the FAO food balance sheets, and comparing the result with the *minimum food requirement* for the survival of all the members of the population, as a function of their breakdown by age and sex, for a minimum level of physical activity (around 1,800 kcal/day). When such a minimum value is used, however, sufficiency would only be achieved if all persons had a very moderate level of physical activity and the food was distributed equally among all in the light of their age and sex.

A more suitable comparison would be obtained by using the parameter of the *average requirement*, which incorporates the differential energy needs arising from persons' different levels of activity.¹¹ In order for those levels to be sufficient, an equitable distribution as a function of those needs would also be required. This condition is not fulfilled, however, because there are limitations of access which affect the distribution, so that the larger the number of persons who do not have enough income of their own to have access to the food market, the greater the sufficiency

¹⁰ FES = production + imports – exports +/- changes in stocks – animal feed – other non-food uses, correcting some of the values recorded (www.fao.org).

¹¹ In defining the average requirements, the FAO criteria used in the model prepared by James and Schofield (1990) were employed, including the assumption of an increase in those requirements in the region.

gap and the greater the action needed to reduce it. Obviously, these problems affect the poorest sectors of the population, so that the countries with the highest levels of indigence or extreme poverty may be expected to have the largest numbers of undernourished persons. Analyzing this question from the income standpoint, this means that societies with a low average FES and a high degree of heterogeneity will have the greatest problems of access to essential foods.

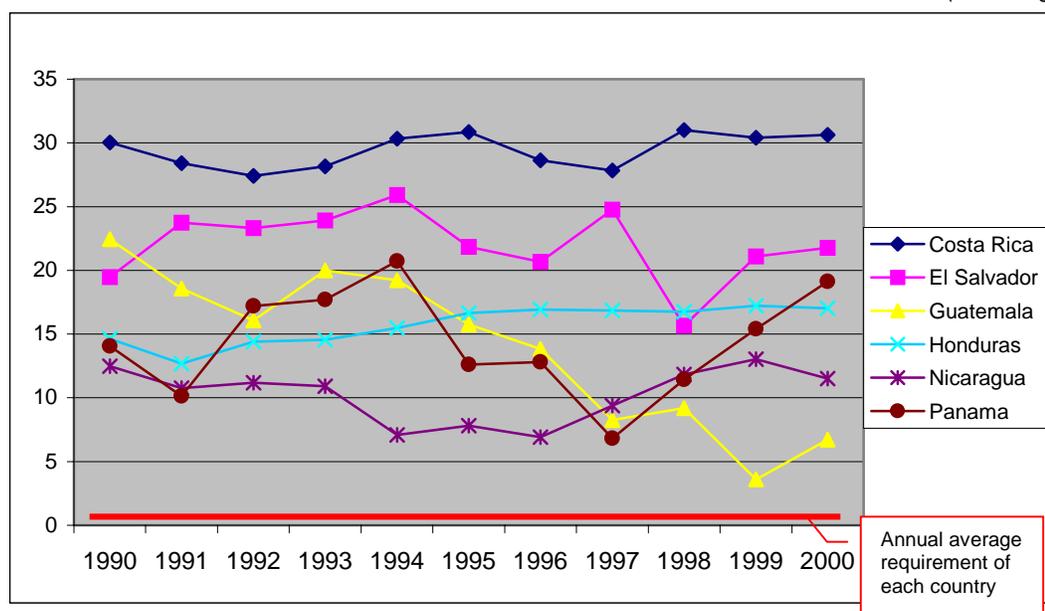
These considerations are implicit in the FAO's undernutrition estimates. These estimates use the minimum requirements as the basic parameter, weighting the FES according to the estimated dispersion of the distribution of goods and using the coefficient of variability of food consumption (CV). Higher values of CV would indicate greater gaps in access and hence higher indices of undernutrition and/or greater requirements.

In view of the above points, a comparative analysis was made between the FES and the average annual requirements of each of the Central American countries for the 1990-2000 period (as percentage distances of the former above the latter, which ranges from 1,947 to 2,116 kcal/person/day). As may be seen from figure 12, in that decade all the countries had a larger amount of kilocalories than their average energy requirements, but the margin is slim in view of the heterogeneity of access within the countries.

Costa Rica has a level of supply which is consistently some 30% higher than its average needs. According to the FAO estimates, this would not be enough to do away with undernutrition completely (which has an incidence of less than 2.5%), but it justifies quite a low CV (0.25) in view of the country's low level of poverty and high degree of homogeneity.

The other countries display higher degrees of internal heterogeneity, so that they should have higher levels of FES in order to cover their average requirements and eradicate undernutrition. However, they have in fact lower levels. Subject to some variation over time, El Salvador, Panama and Honduras ended the decade with supplies about 20% above their requirements, while Nicaragua was only about 10% above its needs. The situation giving rise to greatest concern is that of Guatemala, whose FES has gone down steadily until it is now only about 5% above its average requirements, which is in keeping with its high levels of undernutrition and malnutrition.

Figure 12
CENTRAL AMERICA (5 COUNTRIES): COMPARISON OF FES^{a/}
AND ANNUAL AVERAGE REQUIREMENTS, 1990-2000
(Percentages)



Source: Special tabulations of FAO Food Balance Sheets.

Note: ^a Food Energy Supply.

This does not mean that there is a shortage of food (on the market), since it manages to satisfy its effective demand, but it indicates that if the objective is to ensure universal access to basic energy needs, then increases in food production or imports are needed in order to cover the deficit.

b) Levels of stability

In addition to having enough foodstuffs to cover the needs at a given moment, it is also important that this situation should be maintained on a sustained basis. The concept of stability refers to the probability of the food supply sinking below a certain percentage of the trend consumption or average energy requirements of the population.

The previous figure shows the volatility of the FES, and if we count up the number of times the FES went down compared with the preceding period, we see that Costa Rica and Honduras display the greatest stability in this respect, with a trend that does not suggest any major positive or negative fluctuations in the future. Nicaragua registered a relatively substantial drop (3.8%) in the middle of the decade, but it returned to its original levels in the last three years of the period. El Salvador and Panama show greater volatility, since except in a couple of years they went through successive three-year cycles of growth and decline, dropping by as much as 9% in a single year. The worst situation is that of Guatemala, which registered a steady decline that took this country from second to last place in terms of aggregate supply, losing 19% over the ten years, which is equivalent to all the growth registered between 1970 and 1990.

In principle, imports may be expected to act as an element to regulate the instability typical of agricultural production. The information analyzed indicates that the stability of the FES in Costa

Rica and Honduras was based on compensatory imports of food. Nicaragua, in contrast, which registered some variations in food stock during the decade, does not appear to have used imports to make up for them. A very different case is that of Guatemala, where the FES went down in spite of increases in the proportion of food imports, facilitated by greater export flows.

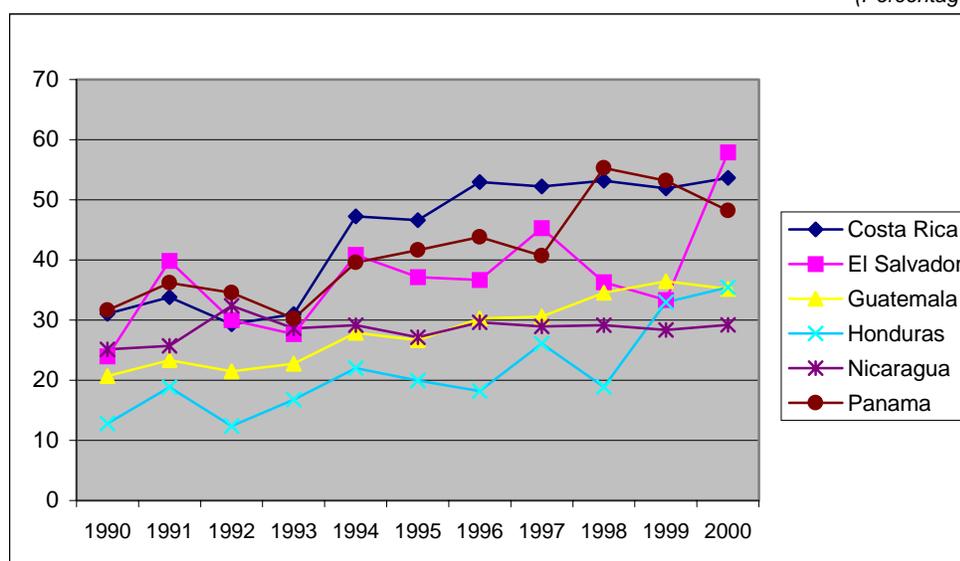
c) Levels of autonomy

The degree of food autonomy or self-sufficiency refers to the relative weight of imports as compared with domestic production and consumption. A first approximation to this could be obtained by measuring the proportion of imported calories in the FES. However, the existing records do not make it possible to determine what proportion of imported and home-produced foodstuffs are not used for human consumption but are used as seeds, animal feed, inputs for processing, or are not consumed at all. It has therefore been preferred to compare food imports with the total food energy stock existing in the country.¹²

In Central America and Panama, there was a general upward trend in imports between 1990 and 2000, with such imports rising from between 12% and 30% of the total stock to between 29% and 28% (see figure 13). El Salvador was the country which registered the biggest relative increase in imported calories (34%), with a very marked increase in the last year of the period. It was followed by Costa Rica and Honduras (23%), which showed a fairly stable trend over the decade. Finally, Nicaragua was the most stable of the countries in this respect, since the relative weight of imports in the total energy stock rose by only 4%.

If we look at the data for the end of the decade (2000), figure 13 indicates that El Salvador, Costa Rica and Panama are the countries with the greatest levels of energy dependence (proportions of between 48% and 58%). In Nicaragua, Honduras and Guatemala, in contrast, these proportions were only between 29% and 30%.

Figure 13
CENTRAL AMERICA (5 COUNTRIES) AND PANAMA:
WEIGHT OF IMPORTS IN TOTAL ENERGY STOCK, 1990-2000,
(Percentage)



Source: Special tabulations of FAO Food Balance Sheets.

¹² The total stock (measured in kilocalories/person/day) equals production, plus imports, less exports. The implicit assumption in this indicator is that there are no significant differences between the proportions used for human consumption and for other purposes and between domestic production and imports.

Nonetheless, a high level of dependence in terms of imported calories does not necessarily indicate a high degree of external vulnerability, if such imports do not represent a very significant percentage of a country's foreign exchange income. The data analyzed for the six countries show that between 1994 and 2001 the value of food imports represented between a quarter and a third of their export income.

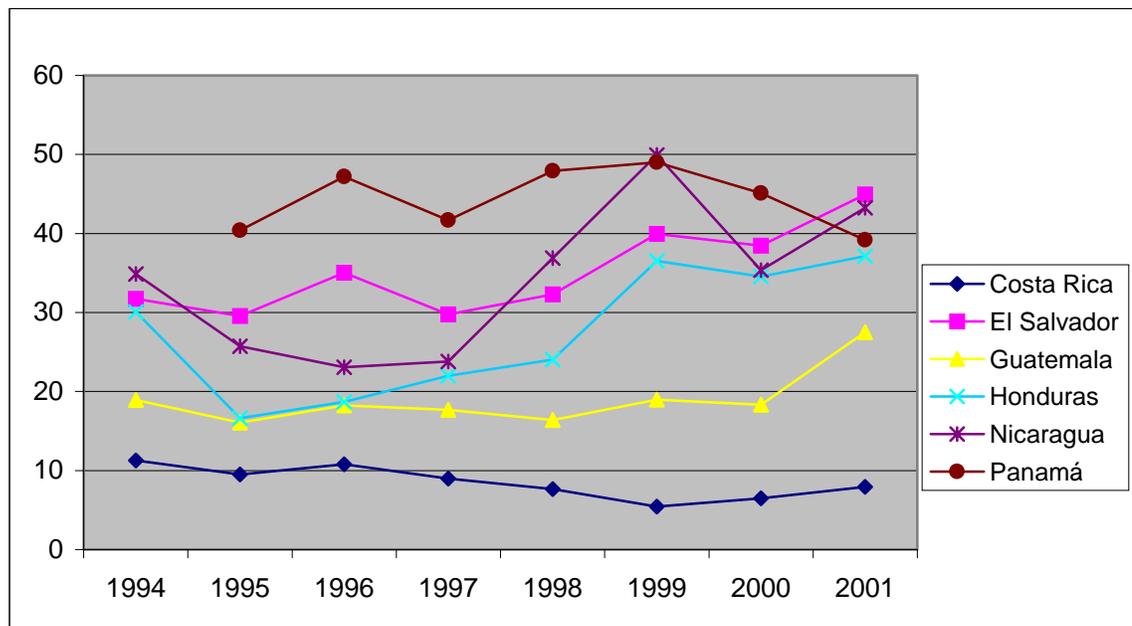
Panama was the country where this proportion remained highest during the period, since only in 2001 did it sink below 40%. In that year, El Salvador and Nicaragua registered higher proportions, while Honduras rose to a similar level to that of Panama.

Costa Rica was at the other extreme, with values between 11% and 5%, so that in general its food system had a low level of vulnerability.

Guatemala registered somewhat higher values close to 20%, so that during the 1990s it had an FES which was increasingly below its needs, although this did not mean a change in the degree of vulnerability of its food system.

Figure 14
CENTRAL AMERICA (5 COUNTRIES) AND PANAMA: VALUE OF FOOD IMPORTS AS A PERCENTAGE OF EXPORT INCOME

(Percentage)



Source: ECLAC, Foreign Trade Statistics Data Bank (BADECEL).

So far, the analyses of dependence have been made in terms of aggregate calories and foreign exchange income. They must now be complemented with an analysis of dependence in respect of the main grains that may be said to be mass-consumption staples, both because of their weight in the diet of the bulk of the population and because many of them are grown by small producers, especially in the case of maize and beans, since rice is predominantly produced on medium-sized to large farms with mechanized cultivation and irrigation.

In Costa Rica (see figure 15), practically all maize is now imported, while in the case of beans, after a long period of self-sufficiency which came to an end around 1993, the country has started to import increasing quantities of this grain. The same is true of rice, albeit to a lesser extent.

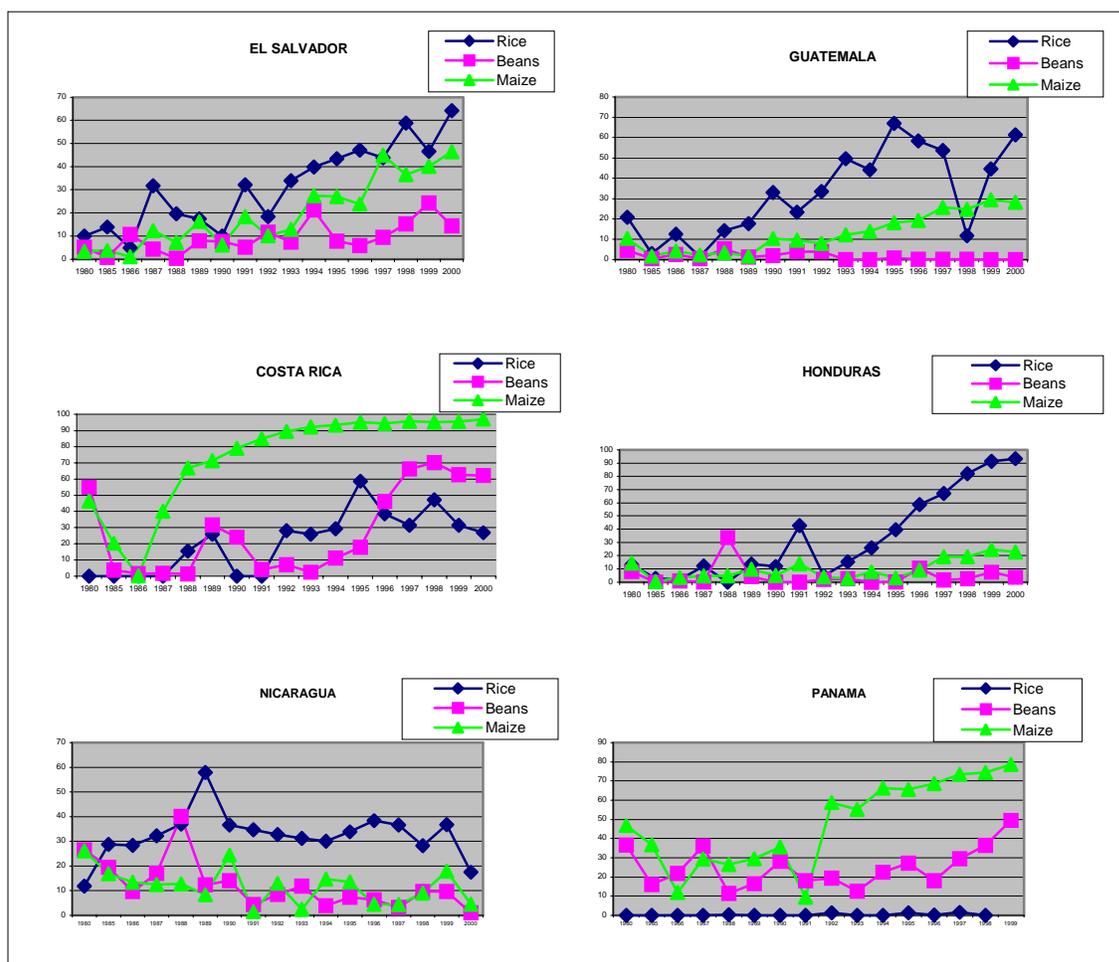
Guatemala is clearly self-sufficient in beans, but it displays a rapidly growing tendency to increase its dependence on imports in the case of rice and, to a much smaller extent, maize.

El Salvador presents a similar picture, but its level of dependence on imports of maize is significantly greater, while the situation regarding beans displays alternating cycles of high and low dependence.

In Honduras, the country's self-sufficiency in beans and maize only seems to have undergone marginal changes in recent years. Rice, however, was the main victim of Hurricane Mitch, so that in recent years its production has gone down drastically.

In Panama, where per capita rice consumption is higher than in the rest of the countries, the situation of self-sufficiency has been steadily maintained. Its levels of dependence in the case of maize and beans, however, have increased sharply in recent years.

Figure 15
CENTRAL AMERICA (5 COUNTRIES) AND PANAMA: LEVELS OF DEPENDENCE ON IMPORTS OF BASIC GRAINS
(Imports as a percentage of volume consumed)



Source: ECLAC, on the basis of official figures of the respective countries.

d) Sustainability

The sustainability of a food system is its capacity to ensure that the desired levels of sufficiency, stability and autonomy are not achieved at the expense of a degree of deterioration in the country's natural resources which will make it impossible to maintain such conditions in the long term, thus affecting the food security of coming generations. The main areas in which environmental problems that affect the food system are encountered are the loss of arable land and phytogenetic varieties and, together with the latter, the loss of ancestral knowledge on their cultivation and functions.

Although many of the general manifestations of environmental deterioration in the agricultural areas of the Central American Isthmus are the same as in other regions, the factors giving rise to them are closely linked with the style of development adopted by the sector in most of the countries, and more specifically, the pattern of land occupation, the expansion of the agricultural frontier and the resulting landholding structure, and the paths followed in the modernization of agriculture.

Thanks to an extremely unequal original pattern of distribution of agricultural land, which the agrarian reform processes changed only in part, the land with the greatest agricultural potential remained in the hands of a relatively small number of large landowners, with also – in some cases – the emergence of a number of high-capital medium-sized enterprises as a result of the opening-up of the land market.

In this context, a modernization process took place which has been described as piecemeal and exclusive. Piecemeal, because it has only extended to some regions, some producers and some products, especially export products and inputs for an agro-industry with an elastic demand pattern, and exclusive, because it has displaced a large part of the small producers, most of them producing staple foods, onto marginal land. In many cases, this process has given rise to heavy concentrations of population in relatively small rural areas, leading to progressive degradation of the natural resources of those areas.

Another characteristic has been the tendency to replace permanent labour with seasonal workers, thus giving rise on the one hand to processes of hyper-urbanization, rural stagnation, over-intensive use of fragile areas and pressures for deforestation, and on the other to excessive fertilizer use, over-mechanization and inefficient use of water in the modern agricultural sector.

Deforestation

When speaking of deforestation in Central America, the causes usually named are:

- i) the colonization of the agricultural frontier by land-hungry peasants using a slash-grub-burn system (the so-called “hamburger connection”) which quickly turns forests into pasture land to satisfy the booming demand for meat in the United States in the 1960s and 1970s;
- ii) the expansion of cash crops such as coffee and bananas; and
- iii) the extraction of timber and firewood, as well as additional pressures due to population growth.

When population density was still low, traditional tropical agricultural practices (footloose agriculture or the slash-grub-burn system) gave rise to operating systems that allowed a process of constantly occupying new cultivated areas, thus obviating declines in productivity. In recent decades, however, a series of processes have contributed to a rapid, albeit not yet fully evaluated, process of environmental degradation in the tropical and subtropical areas where the expansion of

the agricultural frontier has been concentrated in recent years (FAO, 1988, pp. 10-101). Among other reasons, this process is due to: population pressures, population movement policies (due mainly to armed conflicts), the opening-up of land by poor settlers for its subsequent occupation by big landowners and even transnational corporations for extensive stock-raising and predatory lumbering practices.

Kaimowitz (1996) gives the estimates made by various authors from 1970 to 1990 but considers that they tend to overestimate the speed of the process. According to his estimates:

- i) In Costa Rica, deforestation went down from between 40,000 and 60,000 hectares in the early 1980s to 18,000 hectares between 1987 and 1992 and only 8,500 hectares more recently.
- ii) In Guatemala, 30,000 hectares per year were deforested in Petén between 1976 and 1987 and 42,000 hectares between 1987 and 1993.
- iii) In Honduras, acceptable observations are only available for the period between 1962 and 1989, when the net rate of deforestation was of the order of 30,000 to 50,000 hectares per year.
- iv) In Nicaragua, a government study made in 1986, using aerial photography to compare the forest cover in that year with the cover in 1972-1974, made it possible to estimate a figure of 120,000 hectares per year. However, many experts are agreed that deforestation slackened substantially between 1983 and 1989, but began to increase again after the end of the military conflict.
- v) In the case of Panama, government statistics show that deforestation went down from 46,000 hectares per year in the 1970s to 35,000 hectares per year between 1980 and 1987.

A noteworthy point in connection with such estimates is the existence of considerable discrepancies between different observers. The figures should therefore be approached with caution. According to Groote and Ruben (1997), Central America suffered one of the fastest rates of deforestation in the world in the 1960s and 1970s and the forest cover of the region is estimated to have shrunk to approximately one-third of the initial area.

Table 4
CENTRAL AMERICA (4 COUNTRIES) AND PANAMA: ESTIMATES BY
VARIOUS AUTHORS OF ANNUAL DEFORESTATION RATES, 1970-1990
(Thousands of hectares)

Country	Grainer	Nations y Komer	WRI	FAO	Merlet	Utting
	1970-1980	1982	1981-1985	1981-1990	1991	1990
Costa Rica	60	60	60	50	40	50
Guatemala	Na	60	60	81	90	90
Honduras	53	70	90	112	108	80
Nicaragua	97	100	121	124	125	70
Panama	31	50	36	64	41	34
Total	Na	340	367	431	404	324

Source: Kaimowitz, 1995.

The data from table 5 below indicate that in 1990 the region was losing some 340,000 hectares of forest each year. These data refer to both closed forests and degraded forests and would indicate that the rate of deforestation went down during the 1990s in comparison with previous decades.

Table 5

**CENTRAL AMERICA (5 COUNTRIES) AND PANAMA: FORESTED AREA
AND ANNUAL DEFORESTATION RATE**

	Forested area (hectares)	% of total land area	Annual deforestation rate (hectares)
Costa Rica	1 476 000	33	50 000
El Salvador	250 000	12	14 000
Guatemala	3 762 000	35	90 000
Honduras	1 731 000	42	180 000
Nicaragua	4 140 000	30	170 000
Panama	3 203 000	42	34 000
Total	17 502 000	36	338 000

Source: *Sustainable Agriculture for Central America*, J. P. Groot R. Ruben (eds.), 1997 Mac Millan Press, London, 1997

To sum up, according to Kaimowitz the rate of deforestation in Central America probably went down from about 400,000 hectares per year at the end of the 1970s to around 300,000 in the 1990s. “This decline is no cause for comfort, however, since even at the current rate of deforestation Central America would lose all of its remaining forest in less than sixty years. [Although] deforestation declined in Costa Rica, Nicaragua (during the 1980s) and Panama ... it increased in Petén, Guatemala and Nicaragua (since 1990). Deforestation is currently concentrated in the Petén and the Northern Transversal Strip in Guatemala; Atlántida, Colón, Olancho and Gracias a Dios in Honduras; [and] Zelaya, Jinotega, and Rio San Juan in Nicaragua”.

Figure 16

CENTRAL AMERICA: EVOLUTION OF FOREST COVER, 1940-1993



Source: Kaimowitz, 1996.

It is perhaps on hillsides, high plains and non-irrigated or seasonal areas in general that the link between poverty and destruction of the environment is most eloquently expressed. Population pressures and the need for food and fuel, in areas which traditionally corresponded to zones of seasonal pastures, have had a considerable impact on the degree of erosion there, and this has had the opposite effect to what was desired, increasing these needs still further in El Salvador, Guatemala and Nicaragua.

Loss of varieties

Deforestation and the increasingly precarious nature of the way the peasant economy functions, due to the processes of deterioration of production potential and progressive subdivision, can lead to another type of erosion: that of the store of traditional knowledge about little-known crops or wild plants that have nutritional or medicinal value.

There are various crops which are important for local consumption in the areas where they are grown and which could be disseminated to other areas. These crops include cereals, pulses for human consumption, roots and tubers and hundreds of wild and cultivated species used in tropical areas because of their high contents of proteins, calcium and iron “which exceed the corresponding

contents of European crops two or three times on average, and unlike the latter, do not require the abundant application of fertilizers and pesticides” (Hurtado, 1977). The same applies to some Central American species which are in danger of disappearing as a result of deforestation.¹³ Relegating such crops to the background can lead us to overlook them and forget the long processes of domestication to which they have been subjected, with irreversible loss of the wealth they represent (FAO, IPGRI, 2001).

Irrigated high-potential land

From the point of view of its environmental impact, the modern agricultural sector has been marked by some tendencies which an environmentally sustainable strategy should check or reverse. These include:

- i) over-mechanization and excessive use of industrial inputs (fertilizers, pesticides, etc.) due to tariff policies which have favoured the importation of machinery and inputs at low cost;
- ii) socially inefficient use of water resources, due to subsidy policies which reduce the private cost of water to an insignificant fraction of its social cost, to say nothing of the implicit costs involved in the over-utilization of ground water;
- iii) the use for cattle-raising of areas eminently suitable for growing crops or planting trees;
- iv) the tendency to reduce the bio-diversity of the ecosystem in certain areas, which affects one of the factors in its long-term stability.

The urban periphery

Rapid urbanization another result (among other factors) of the particular land tenure structure and the modernization processes characteristic of agriculture in the subregion, since although most urban growth now is due to natural population growth in the cities, it had its origin and continues to be fed by the expulsion of population from rural areas, with the consequent establishment of human settlements in areas of ecological risk, without water and sanitation, where diseases due to biological and chemical pollution abound. These settlements are also marked by their vulnerability to natural disasters, as witnessed, in all Central American cities, by the enormous proliferation of marginal suburbs lacking sewerage and refuse collection systems and suffering from extremely high degrees of overcrowding.

Energy consumption in food processing

Finally, with respect to sustainability, mention should be made of the problems of energy efficiency in food systems, since in effect these are systems for the transformation of energy from various sources into food energy, measured in both cases in calories.

Steinhart and Steinhart (1974) estimated that the energy required per calorie unit available on the table of an average consumer in the United States amounted to nine calories of commercial energy.¹⁴ Insofar as the consumption pattern that the countries tend to imitate is that of the United States, its spread in the Central American countries would mean that for this purpose they would have to use much more than the commercial energy currently available for all activities, simply to satisfy the present per capita food consumption, which is insufficient.

¹³ According to Barrance (1997), the Central American species of global importance include: *Albizia guachepile*, *Bombacopsis quinata*, *Calliandra calothyrsus*, *Calophyllum brasiliense*, *Cedrata odorata*, *Cordia alliodora*, *Gliricidia sepium*, *Leucaena spp.*, *Liquidambar styraciflua* and *Pinus caribaea* (var. *Hondurensis* Barrance).

¹⁴ This calculation includes the processes of production, processing, transport, marketing, acquisition and preparation of the foodstuffs in question.

3. Food quality and safety

It is sufficient to note the enormous incidence of food transmitted diseases (FTD) in most of the countries of the region, and their effects on food utilization, to see that the problem of the safety of food is another manifestation of food insecurity and that actions to overcome this problem should form part of policies to combat such insecurity.¹⁵

The information systems on this subject are not fully comparable or exhaustive enough to permit more reliable statements. The analysis of some indicators on water and sanitation, as well as on the incidence of some FTDs is revealing, however, especially when they are compared with the indicators for countries at a better stage of development (see table 6).

Since the incidence of these kinds of problems is assuredly significantly higher in low-income sectors, this will tend to further aggravate the already serious problems of access to food, drinking water and health services, as the cholera epidemic dramatically showed.

Table 6

CENTRAL AMERICA (5 COUNTRIES) AND PANAMA: COVERAGE OF DRINKING WATER AND SANITATION SERVICES AND INCIDENCE OF DISEASES RELATED WITH THEIR QUALITY

Country	Percentage with service 1985-1995	Percentage with safe water, 1990-1995	Percentage with sanitation	Rate of mortality from intestinal infections per 1000, 1985-1995	Estimated episodes of diarrhea in children under 5	Cases of cholera, 1991-1993	Deaths from cholera, 1991-1993
Costa Rica	100	92	100	0.27	4.6	26	0
El Salvador	53	77	81	4.09	4.1	15 673	563
Guatemala	67	62	68	7.46	5.2	49 673	563
Honduras	77	65	82	6.56	3.0	2 320	44
Nicaragua	62	58	59	9.83	2.0	9 541	266
Panama	84	84	91	0.66	2.0	3 636	82

Source: Prepared by the authors on the basis of ECLAC, 2002 and INACAP/PAHO, 2002.

Apart from the precarious sanitary conditions in which meals are typically prepared in the home and the ingredients used, one of the most frequent sources of food poisoning is the sale of food in the street, which is so widespread in Central American cities and which is blamed for much of the spread of cholera. This is a traditional practice which has grown apace with rapid urbanization, the increase in the distance between the home and the workplace, and the growing participation of women in activities outside the home (see table 7).

There are no statistics on the magnitude of this practice, but at a workshop organized by the FAO Regional Office the participating countries gave the results of some analyses of the contaminants found in food sold in this way: in El Salvador, 60% of the food stalls had fecal coliform bacteria in some of their products; in Guatemala City, 90%; in Honduras, 43% had some form of contamination, and in Nicaragua, between 60% and 74% of dairy products contained fecal coliform bacteria (FAO/RLAC, 1990).

¹⁵ We are referring in particular to salmonellosis, shigellosis, hepatitis, typhoid, cholera, etc.

Table 7

CENTRAL AMERICA (5 CITIES): NUMBER OF SIDEWALKFOOD VENDORS IN THE MAIN CITIES

City	Nº of vendors	Percentage of female vendors
San Jose	800	s.i.
San Salvador	4 000	70
Guatemala	7 500	25
Tegucigalpa	2 000	90
Managua	10 600	75

Source: FAO/RLAC, 1990a.

In spite of the health problems in question, this is not an activity that can be done away with altogether, precisely because of the reasons which gave rise to its growth, because to start with, it satisfies a keenly felt need in the low-income sector, since it is available where it is needed, is in keeping with the eating habits of its customers, and sells food at low cost, among other reasons. Furthermore, these sidewalk food stalls represent a source of income and employment for a by no means insignificant number of persons, who are often poorly qualified for other types of work and are very often women, who are thus able to eke out their scanty income. The approach to be taken should rather be to establish mechanisms for health control and improvement of the conditions in which the food is prepared and sold, so as to reduce the negative effects to the minimum.¹⁶

4. Access to food: poverty and indigence

The indicator most frequently used in Latin America for the study of poverty is the poverty line, which – without going into details about its scope and limitations for the purposes of the present study – takes as its empirical starting point a comparison between income levels and the cost of a standard food basket sufficient to satisfy the energy and protein requirements of an individual.^{17/18}

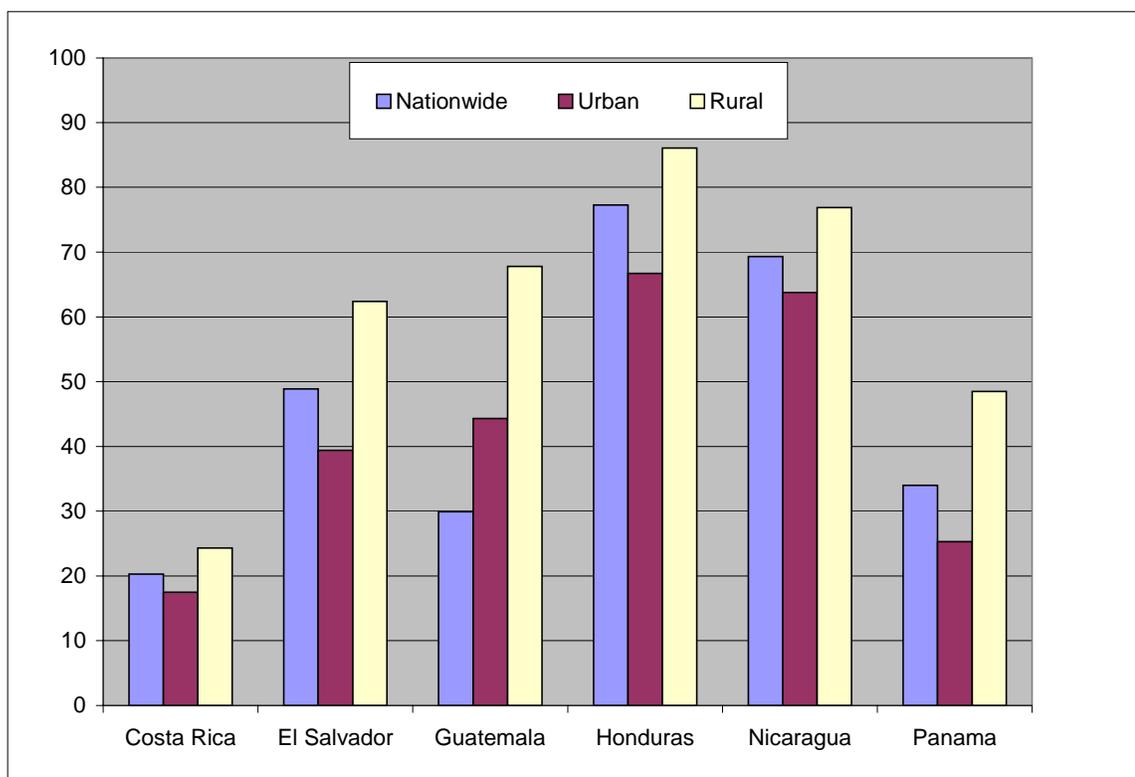
An income which is equivalent to the value of that basket forms what is called the *indigence line*. The *poverty line* represents the value of the cost of such a basket, multiplied by a factor (generally 2) corresponding to the relation between total consumption expenditure and the expenditure on food in the lower middle income strata.

¹⁶ The FAO has carried out some initiatives in the area of technical assistance, aimed at creating control standards and training mechanisms for the sale of food on the street, including a video and a “Guía didáctica para la capacitación de vendedores de alimentos en la vía pública” (FAO/RLAC, 1992a).

¹⁷ See in this respect *Desarrollo sin pobreza*, UNDP, Quito, November 1990, which not only describes the methodology in detail but also examines its limitations.

¹⁸ The extreme poverty line is established on the basis of the daily monetary value of a basic food basket designed to satisfy the nutritional needs of an adult.

Figure 17
CENTRAL AMERICA (5 COUNTRIES) AND PANAMA: PERCENTAGE
OF POPULATION UNDER THE POVERTY LINE, 2002



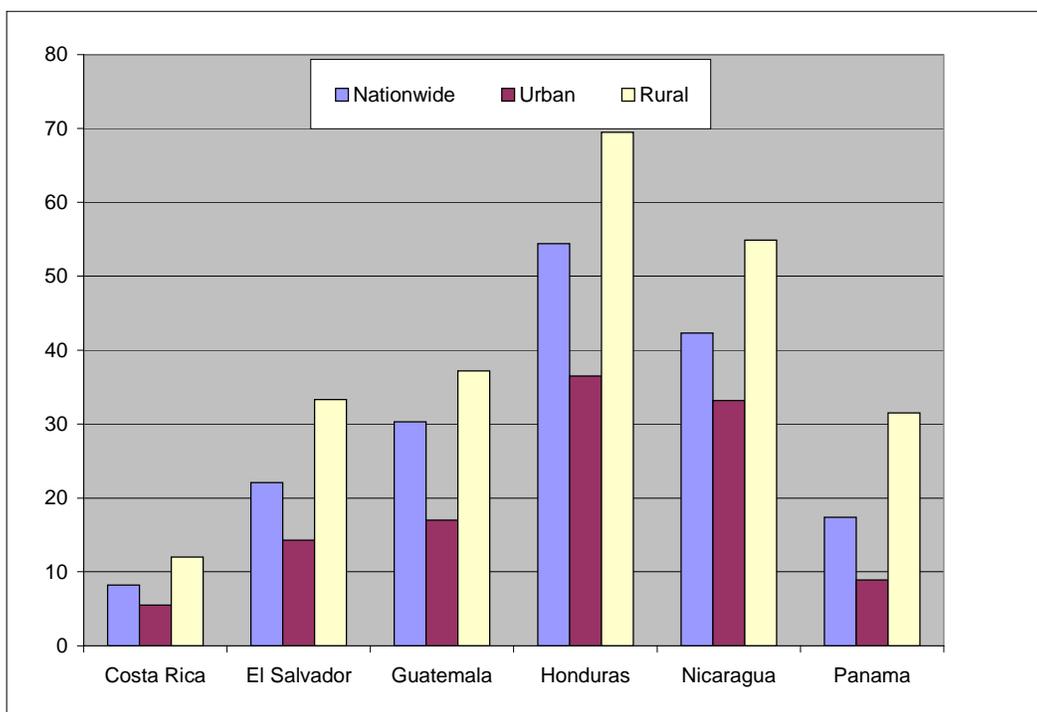
Source: ECLAC, *Social Panorama of Latin America 2002-2003*.

According to the available estimates, there are about 20 million persons in a state of poverty in the region, of whom 12 million are in the rural sector. In other words -- unlike the situation in the rest of Latin America, where in absolute terms urban poverty now exceeds rural poverty -- in Central America, both in absolute and relative terms, the bulk of poverty is concentrated in the rural sector.

It seems reasonable to assume that estimates of indigence would provide a first approximation to the incidence of problems of access to food, insofar as basic food requirements and their cost are the starting point for those estimates.

For the region as whole, the number of indigent persons is estimated to be around 12 million, of whom rather less than 5 million are urban residents, while 7.7 million live in rural areas. In addition to the contrast between rural and urban areas in terms of the proportion of the population below the poverty line, there are also equally significant contrasts in the proportion of the population lacking proper housing or basic services or living in conditions of severe overcrowding, as reflected in the figures on access to drinking water, sewerage and sanitation in general noted earlier.

Figure 18
CENTRAL AMERICA (5 COUNTRIES) AND PANAMA:
LEVELS OF URBAN AND RURAL INDIGENCE, 2002
(Percentage)



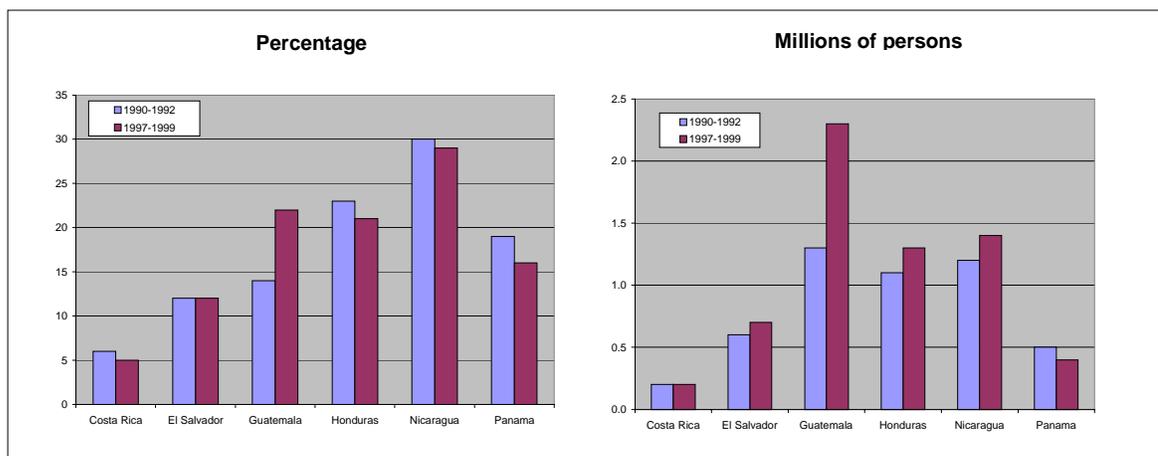
Source: ECLAC, *Social Panorama of Latin America 2002-2003*.

Aside from the reservations indicated in chapter I regarding the differences between extreme poverty and hunger, poverty indicators may be taken as an approximation to the size of the population having problems of access to food (but not necessarily undernourished), while the indicators of indigence may be taken as an approximation to the incidence of undernutrition. The fact that there is not necessarily a mutually direct relation between the levels of poverty and of undernutrition does not disprove the foregoing, since on the one hand there are mechanisms of adaptation to low levels of food intake which operate in the fields of conduct, biological and metabolic aspects (James and Schofield, 1990, pp.91-96), some of which are reflected in declines in performance, while on the other hand the distribution of food within the family, on which little is known, and the time available to women for eking out a given income help in some cases to partly offset the effects of poverty.

From the Food Balance Sheets and the coefficients of variability of food consumption, it is possible to gain a rough approximation of the magnitude of undernutrition, that is to say, the percentage of the population which is below the minimum levels established in the light of the demographic characteristics of each country (see figure 19).

Figure 19

CENTRAL AMERICA (5 COUNTRIES) AND PANAMA: ESTIMATED PROPORTION OF THE POPULATION UNDER THE MINIMUM NUTRITIONAL LEVELS¹⁹



Source: Prepared by the authors on the basis of CAC (2002).

As may be seen, except for Costa Rica and Panama, in the rest of the countries there was an increase in the number of undernourished persons, particularly in Guatemala, so that the total number of families in the region in this condition rose to over 6 million, equivalent to half the number of persons below the indigence level.

¹⁹ Central American Agricultural Council (CAC), "Seguridad alimentaria en Centroamérica: Del manejo de crisis en el corto plazo al manejo de riesgos. Reducción de la vulnerabilidad en el largo plazo. Nota estratégica". Paper presented at the World Food Summit: Five Years Later, July 2002.

C. The food system

Until recently, there was a frequent tendency to identify food policy with agricultural policy and hence to reduce the food problem largely to a problem of the domestic supply of agricultural products. As noted earlier, the concept of food security itself was restricted in its first formulations to the problems of aggregate availability, especially of basic grains.

This type of erroneous identification tended to seriously limit the scope of food policy: firstly, because a substantial, often predominant and undoubtedly growing part of the aggregate value of the goods making up the food pattern of the population comes from sectors other than agriculture. Secondly, because as a result of the linkages of agriculture, as a source of demand for inputs and means of production or as a provider of inputs for agro-industrial processing, the behaviour of the agricultural sector is often conditioned by decisions taken in the sectors with which it is linked. Thirdly, because if it is accepted that the ultimate objective of food policy is to ensure universal satisfaction of the basic food requirements of the population, problems of unsatisfied demand come to be more important than problems of aggregate availability.

It is not enough, however, simply to admit that the food acquired by consumers is the result of a set of linked activities, from primary production to retail distribution, via collection and storage, agro-industrial processing and wholesale trade, since it is necessary, in addition to the technical and functional relations between the various spheres of activity in question, to include the characteristics and relations of the social agents participating in each of those spheres, taking into account the role they play or could play under a given policy framework aimed at achieving food security.

1. General characteristics of a food system

A food system embraces the whole set of socio-economic and technical/production relations that directly affect the processes of primary production, agro-industrial processing, storage, distribution, marketing and consumption of food.

As well as considering the food system as a flow of values, it must also be conceived as a flow of information extending from the producers of inputs and means of production for agriculture, all the way up to consumers, and vice versa. Notwithstanding this consideration, however, this report centers on the food system as a social system which is different from other systems of production and consumption of goods because of the biological and cultural determinants both of its starting point – agriculture – and its finishing point, human nutrition.

The emphasis in describing the characteristics of a food system is placed on some of the main agents in the production structure and on consumers with problems of food access, since the policy measures adopted must be applied in relation to them, so that, in this sense, the food system is the application framework of that policy.

Once the objectives of food policy have been defined, the food system approach makes it possible to evaluate the degree of coherence in the behaviour of the various agents with respect to those objectives. The possibility of attaining them depends on whether public policy has been designed in the light of a realistic evaluation of the interests, behaviour and power of the different groups of producers, consumers and other agents who play a determining role in the system. The application of such an approach is particularly useful in the case of structures with a high degree of heterogeneity, like those of the food systems of Central America, since it makes it possible:

- i) to explicitly take account of the motives of the agents involved;
- ii) to detect the degree of coherence or possible contradictions in policies designed to influence the agents' behaviour;
- iii) to identify bottlenecks in the chain and the potential capacity of some agents to become focal points for making production processes more dynamic; and
- iv) to determine the efficiency of the information transmission process which affects the types of food produced, how it is produced, and where.

For the purpose of our analysis, we can consider that the food system is made up of a given production and distribution structure (henceforth referred to as the production structure) and a given demand or consumption structure made up of a set of consumption models or food demand patterns.

The characteristics of the *production structure* of the food system which are most important for the design of food policy are:

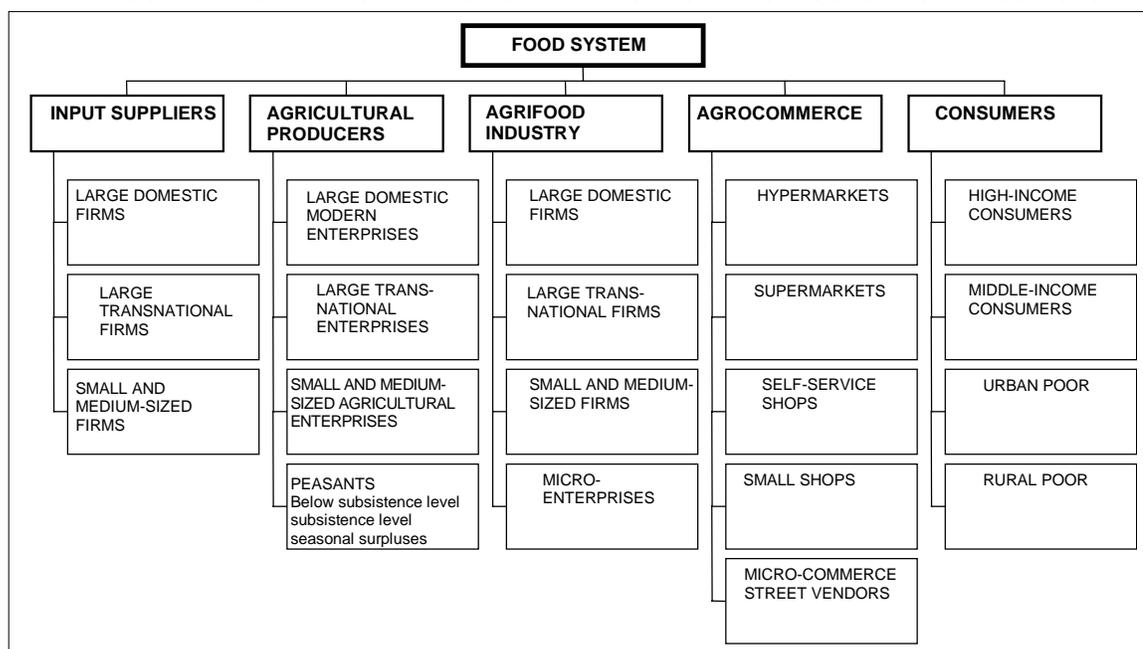
- i) the heterogeneity of the production and distribution units which make it up. The food system is the most heterogeneous of all the economic sectors, since in it peasant units exist side by side with high-capital agricultural enterprises; micro-enterprises with great monopolies and oligopolies of domestic and transnational agro-industry; tiny shops with chains of supermarkets or hypermarkets; street food vendors with big restaurant companies, and so forth;
- ii) the asymmetrical relations existing between the agents and, in many cases,
- iii) insufficient linkages between primary production and the processing sector.

Among the characteristics shared by small and medium-sized countries like those of Central America are: scanty or inefficient linkages between agriculture, industry and services; the substantial (and in many cases growing) weight of imported inputs and means of production in food production; and shortcomings in

the infrastructure, location and characteristics of the collection and storage systems of agro-industry and commerce which raise the transaction costs of the final goods they handle.

Figure 20

SCHEMATIC REPRESENTATION OF THE PRODUCTION STRUCTURE OF A FOOD SYSTEM



Source : Prepared by the authors.

On the basis of an analysis of the production structure taking account of these dimensions and a food strategy with clear objectives, a set of specific and differentiated policies can be proposed which will make it possible to promote or inhibit the actions of the different agents as a function of their degree of compatibility or incompatibility with those objectives.²⁰

Analysis at the level of the chains as a policy framework should make it possible to:

- i) determine where some conflicts between the agricultural sector, industry and commerce and among different types of producers occur, and what form they assume, in order to establish what factors impede agreement among them, so as to seek “positive-sum games” among the various agents;
- ii) increase the transparency of the relations and access to information of the weakest agents in the chains;
- iii) bring in considerations of environmental sustainability, by detecting the spheres of activity and types of agents that give rise to the environmental deterioration for which certain products or producers, etc., are blamed (Koulychizky, 1985, p. 139).

2. The agents forming part of the different sectors of Central American food systems

The capacity of producers to respond to policy guidelines designed to improve food security depends on the structural characteristics of the agricultural, agro-industrial and distribution sectors or, if preferred, the main types of units making up those sectors.

²⁰ <http://www.rimisp.org/seccion.php?seccion=57>

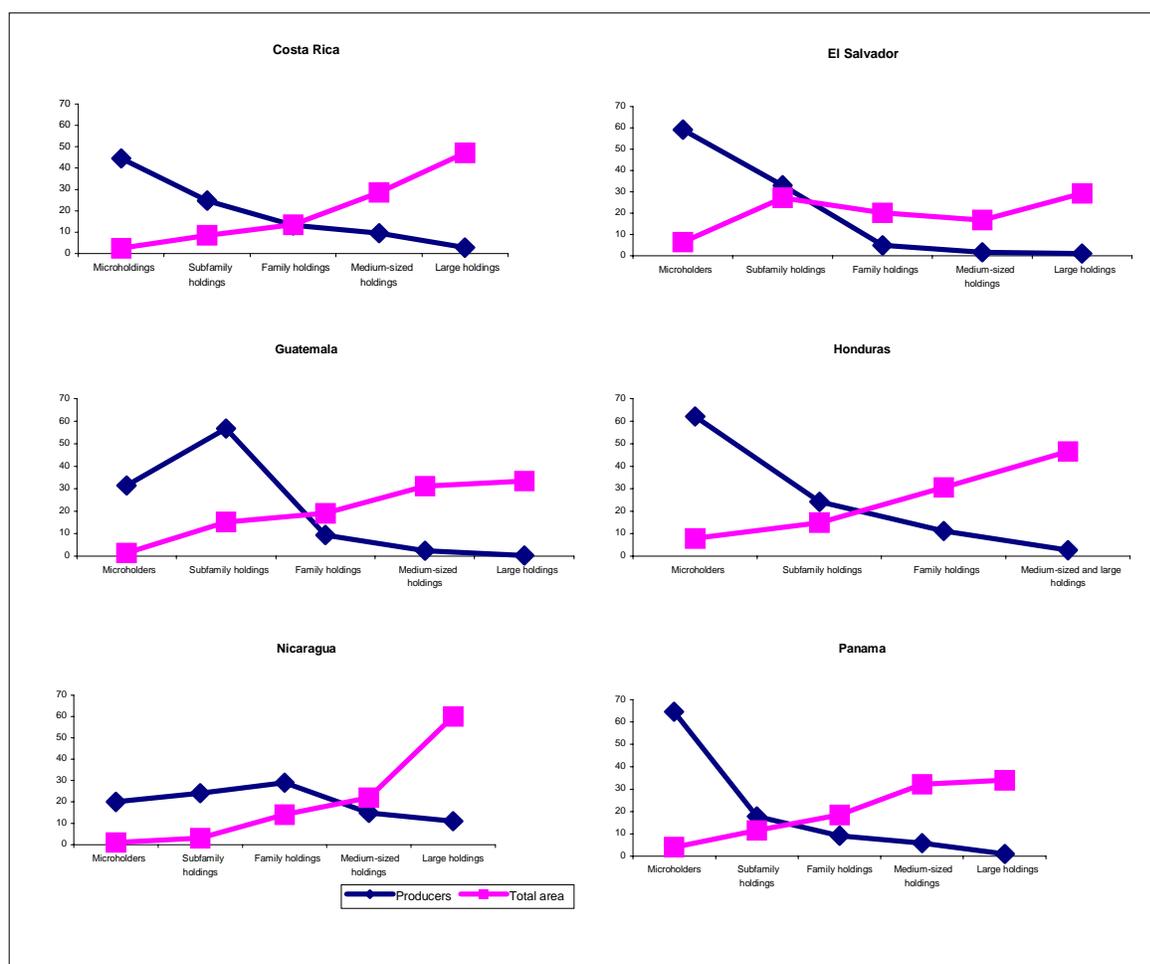
a) The primary sector: main types of production units

In Central America, the production units of this sector are of two types, with a very large peasant sector and a small business sector, with different degrees of modernization, in contrast with the more homogeneous structures like those of South Korea, for example.

In homogeneous agricultural structures, a single technological choice is valid for the great majority of the production units, as also is a single set of policy incentives. In less homogeneous structures, in contrast, technological designs and patterns of incentives which take account of the differences in operational logic of the different types of units are needed.

Figure 21

CENTRAL AMERICA (5 COUNTRIES) AND PANAMA: COMPARATIVE LAND TENURE STRUCTURES



Source: ECLAC, on the basis of official figures from agricultural censuses carried out between 1983 and 2000.

A sector has been emerging which falls somewhere between the peasant and business sectors of agriculture as a form of social organization of production. The size and importance of this sector varies from one country to another, and it has not been studied much in agricultural research, but it corresponds basically to a middle-level form of agriculture in which family labour is still quite important, but in which production methods have been modernized and the operational logic is based on business criteria.

Rough estimates of the relative importance of the different types of production units in the subregion indicate that business agriculture generates some 60% of production for domestic consumption and rather more than two-thirds of that for export. In the cases of maize, beans and potatoes, however, most of the production comes from the peasant sector.

Beyond the generic characteristics of peasant agriculture – that it is based on the family and that its production decisions are closely linked with considerations of consumption, there are significant differences as regards its potential both for ensuring the food security of the families in question and contributing to increased national availability of staple foods or export products.

It is important to bear in mind – although this is not sufficiently taken into account in policy design – that there is a high degree of heterogeneity within the peasant sector itself, in that its strategies for overcoming poverty and making use of the available labour force only take up part of the time: the remainder is spent on various forms of non-agricultural rural employment which usually account for over 40% of its total income.

b) The effects of natural phenomena and price cycles on agricultural production and exports

In recent years, the Central American agricultural sector has been affected both by the behaviour of world agricultural product markets and by weather phenomena which have led to serious declines in production volumes, with direct consequences for family income and the supply of goods and jobs in the sector.

At the external level, the great abundance of exportable agricultural products and, in recent years, the weak demand for imports in this field have led to an increase in surpluses and to a decline in the international prices of these products, especially basic grains. Furthermore, the heavy inflow of foreign capital in the 1990s, which led to the appreciation of national currencies, has exposed agricultural producers to intensive competition, adversely affecting production conditions and income.

Table 8
INTERNATIONAL PRICES OF SOME BASIC GRAINS

	1996	1997	1998	1999	2000	2001	1999	2001
	(Dollar per ton)						(Index 1996=100)	
Rice	464.0	441.5	446.3	450.7	367.3	306.6	97.1	66.1
Maize	164.6	117.3	101.6	90.2	88.2	89.6	54.8	54.4
Wheat	222.0	171.3	135.0	120.1	122.2	135.9	54.1	61.2
Sorghum	150.0	109.6	98.0	84.4	88.0	95.2	56.3	63.5

Source: ECLAC,(2003b), "Istmo Centroamericano: Los retos de la sustentabilidad en granos básicos" (LC/MEX/L.554), MéxicoCity,Subregional Headquarters in Mexico, May, 2003.

Likewise, successive natural phenomena have highlighted the vulnerability of the Central American agricultural sector. Hurricane Mitch, whose effects are still felt in terms of credit arrears and the demand for reinvestment, was followed by two earthquakes in El Salvador early in 2001 and a drought which has affected all the countries of the subregion to a greater or lesser extent.²¹

²¹ It is estimated that the two earthquakes caused 1,142 dead and over 8,000 injured, the disappearance of 41,440 micro- and small enterprises and 55,000 jobs, total loss or damage to the dwellings of 25.6% of the population of El Salvador, and the decline into extreme poverty of 250,000 persons. Total losses are estimated at US\$ 1,660 million, equivalent to 13% of the GDP and 55% of the exports of that country in the year 2000 (UNDP, undated). It is also necessary to take into account the effects of more predictable natural phenomena such as the El Niño and La Niña currents. According to an estimate made before the drought, the total economic damage caused by natural phenomena in the subregion has averaged 2% of GDP since 1972 (ECLAC, 2002b).

Between May and August 2001 – the period of greatest demand for water for the cultivation of basic grains – rainfall was below historical levels and was less than the amount needed for agriculture. This caused a significant reduction in yields, which were already quite low by international standards, and in some areas production was completely lost. The irregular rainfall in 2002 further accentuated these problems.

It is estimated that over 18% of the expected production of the region was lost due to the drought, which led to a fall in stocks and made it necessary to spend more on food imports. This is estimated to have adversely affected the living conditions of some 600,000 rural dwellers.

Table 9
CENTRAL AMERICA: ESTIMATED LOSSES IN BASIC GRAINS
CAUSED BY THE DROUGHT IN THE 2000-2001 CROP YEAR

Type of grain	Producción perdida (thousands of quintals)	Value lost (millions of dollars)
Maize	7 058	62.4
Beans	930	21.9
Rice	1 241	13.5
Sorghum	1 341	8.8
Total	10 570	106.6

Fuente: ECLAC/CCAD, *El impacto socioeconómico y ambiental de la sequía en 2001 en Centroamérica* (LC/MEX/L.510), Mexico City, ECLAC Subregional Headquarters in Mexico, November, 2002.

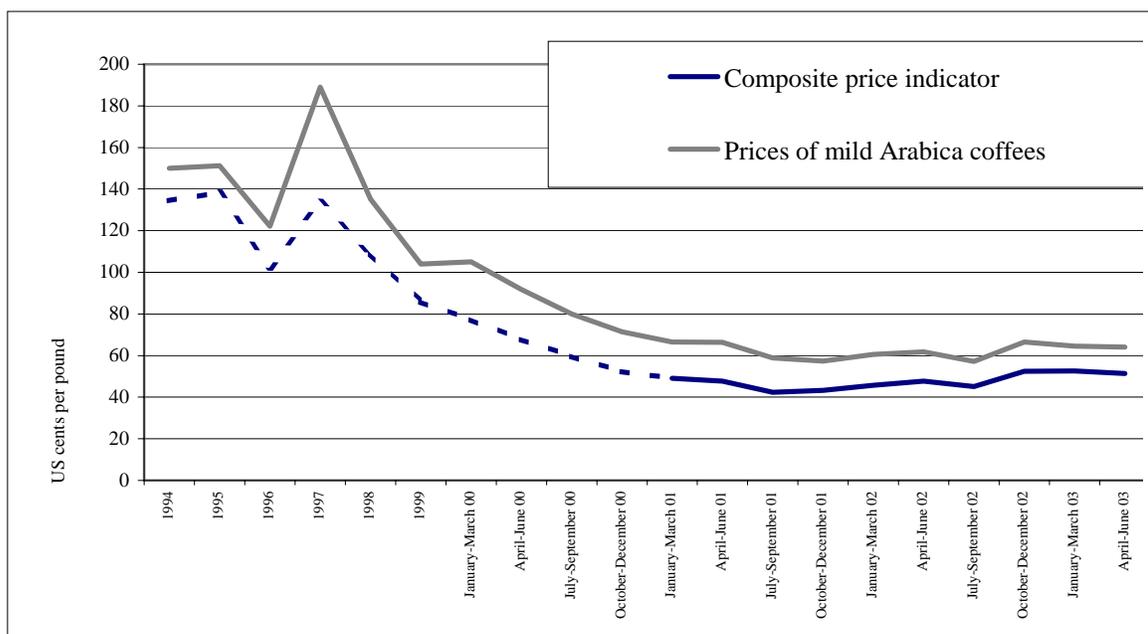
These events aggravated the already difficult situation of agriculture in the region, which had already been affected by an unprecedented crisis in the coffee sector. The world glut of coffee had led to a big increase in stocks over the last five years, causing a serious decline in world coffee prices. It is estimated that in 2001 coffee exports brought in US\$ 713 million less than the average values for the 1994-1998 period (a loss equivalent to around 1.2% of the region's GDP in that year), slumping from 16% of total exports of goods in the five-year period in question to only 7% in 2001.

Table 10
CENTRAL AMERICA (5 COUNTRIES) AND PANAMA: VALUE OF COFFEE EXPORTS
(Millions of dollars)

	1998	1999	2000	2001
Costa Rica	409.4	288.7	272.0	161.9
El Salvador	323.7	245.1	297.9	115.1
Guatemala	586.5	562.6	573.7	306.5
Honduras	103.3	429.8	256.1	340.6
Nicaragua	173.4	135.3	170.9	104.9
Panama	23.9	18.5	16.0	11.1

Source: ECLAC, "Istmo Centroamericano: evolución del sector agropecuario, 2001-2002" (LC/MEX/L.550), México City, ECLAC Subregional Headquarters in México, February, 2003 and for Honduras, ECLAC, Foreign Trade Data Bank for Latin America and the Caribbean (BADECEL).

Figure 22
EVOLUTION OF INTERNATIONAL COFFEE PRICES: COMPOSITE PRICE INDICATOR AND PRICES OF MILD ARABICA COFFEES



Source: International Coffee Organization (ICO), official web site (<http://www.ico.org>).

The economic and social effects in coffee-growing areas were serious, since the decline in coffee prices meant a sharp drop in the incomes of the nearly 300,000 coffee-growers in the region, with consequent difficulties in paying existing debts and obtaining new loans. Likewise, there was a big contraction in the demand for labour, equivalent to the loss of 170,000 permanent jobs and some US\$ 140 million in wages in 2001. In view of the size of the ongoing glut, it is unlikely that coffee prices will register any significant recovery in the short term.

Natural disasters and the decline in both international demand and export prices for basic grains and coffee are having very severe effects on the quality of life of the population and local economies, especially in the hillside and non-irrigated tropical areas of the region. This has seriously aggravated the food deficits of a significant proportion of rural areas in Central America. In this connection, it is necessary to bear in mind the special characteristics and structural dynamics of the agricultural sector in the region -- including the extensive areas of land devoted to stock-raising, the use of fertile land for more profitable non-traditional crops, the atomization of agricultural holdings for use in subsistence agriculture, the low land yields due to technological shortcomings, the increase in the exploitation of fragile areas and their deforestation by slash-and-burn methods, and the reduction in biodiversity – as unavoidable components of a national food security policy that will make it possible to deal more successfully with the difficulties raised by nature and by the behaviour of international markets.

c) The agrifood industry

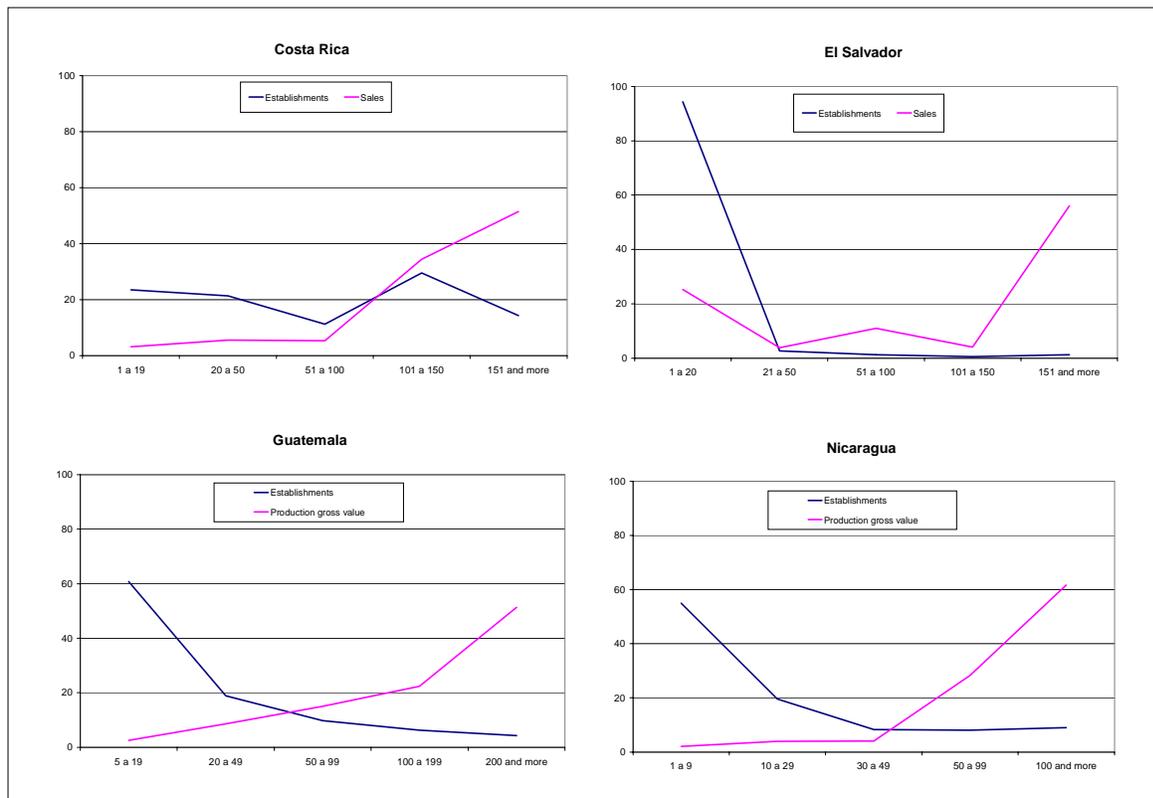
Agro-industry and agro-commerce are the main guiding elements of the food system, not only because of their inherent functions but also because they significantly influence the rest of that system through their backward linkages with agricultural production and their forward linkages with consumers.

Compared with other industrial branches, the agrifood industry displays certain differences in the structure of the markets in which it operates as a purchaser of inputs and a seller of products, and in the factors determining its competitiveness. These differences are due to the almost complete dependence on the agricultural inputs market and the implications of the sale of food.

In Central America, the agrifood industry is the sector with the greatest relative weight in manufacturing, since the food, beverages and tobacco branches account for a steady 46% or so of the agro-industrial sector, although their share in exports has been going down.

The dynamism of this sector has systematically tended to exceed that of agriculture, even in periods of recession, which is in keeping with the tendency of demand for agro-industrial products to grow more rapidly than that for unprocessed agricultural products as per capita income increases. It may be assumed that its share in the total for manufacturing will continue to maintain its relative weight, considering that the proportion of agro-industrial products in agrifood consumption is still no more than 30% in most of the countries, whereas in the Western industrialized countries this proportion reaches levels of 80% or even over 90%.

Figure 23
CENTRAL AMERICA (4 COUNTRIES): STRUCTURE OF INDUSTRIAL SECTOR



Source: Arroyo and Nebelung, 2002.

d) The structure of the commercial sector

Even before the appearance and spread of supermarkets, the food marketing sector had a critical place in the food system, since because of its presence everywhere, its incidence on the prices paid by consumers and its position as the end-point of the supply chain and the starting-point of the flow of information to producers it aids in the adjustment between production and consumption. With the growing influence of supermarkets, this sector, which was originally an information point, has increasingly become the control point in the evolution of food systems.

It is the socio-spatial distribution of the population which determines the structure of food marketing systems. This structure represents the means for functional adaptation to socio-economic conditions and the spatial location of the population served: factors which, together, determine the scale of operations, the forms of relations with consumers, and the forms of competition with other units – in short, the inherent internal operational logic or, if preferred, the criteria governing the quality, types of goods, prices, varieties, forms of presentation, etc. of the food supplied and of the complementary services accompanying its sale.

The radius of action of commercial units depends on their coverage in terms of the number of families served, and it defines their type. The tendency is that the greater the distance, the greater is the size, coverage and assortment offered and the lower the price.

In the food trade, a modern sector made up of supermarket and hypermarket chains organized along the lines of their counterparts in the industrialized countries, with sales techniques and an assortment of goods fully comparable with those that a consumer would find in the latter countries, exists side by side with a vast range of micro-units organized on the basis of family labour, which, like the food micro-industry and the preparation and sale of food in the street, are the urban expression of the peasant or artisanal forms of organization of production already referred to earlier.

Small-scale commerce

In urban areas, three broad types of small-scale traditional commerce may be distinguished: independent shops (the “corner shop”), the tenants of stalls in a public market, and stalls in mobile markets or “flea markets”. Their common feature is the basically family nature of the unit, the high workload, the low level of formal education, the small size of the shop and its infrastructure, and its dependence on wholesalers or middlemen.

Between these two extremes: supermarkets and traditional micro-commerce, there is a stratum of medium-sized shopkeepers whose size varies from one country to another: some representing the survivors of disappearing forms of trade, others devoted to particular lines of commerce, others representing a relatively recent form of commerce along the lines of the United States convenience stores, which cater for emergency purchases and have long opening hours, and finally others representing emerging forms of specialized commerce catering for high-income customers. The presence of this stratum does not alter, however, the high degree of concentration and polarization in commerce as a whole.

In the development of retail trade there was first of all a kind of division of labour based on the spatial distribution of urban social stratification: whereas the more modern forms tended to cover the middle- and high-income sectors, traditional retail trade took care of the routine purchases of the poorer sectors. A significant and growing proportion of low-income families are using the supermarkets, however, as these expand their radius of coverage.

One of the apparent paradoxes in the operation of retail trade is the recurrent fact – which is important for food policy – that poor consumers in marginal areas pay higher prices for lower-quality goods than consumers who have access to more modern establishments. This raises the question of why micro-commerce continues to exist. There is a frequent tendency to explain this by the “inefficiencies” (of scale and other types) of small-scale commerce, but in view of the competitive environment in which this operates there must be other reasons that justify its existence. One of the first of these is the proximity of small shops to people’s homes, together with the special relations that usually exist between buyers and sellers (in contrast with the impersonal or universal nature of the relations existing in modern commerce), the sale of goods in small amounts in keeping with the customers’ purchasing power, forms of payment that fit in with the

irregular nature of the customers' income, and even the fact that persons who do not have a refrigerator benefit by purchasing small daily portions of perishable foods.

Table 11
**ADAPTATION OF RETAIL TRADE TO THE NEEDS OF
CONSUMERS IN LOW-INCOME NEIGHBOURHOODS**

	Retailers with established premises	Street vendors	Itinerant street markets	Retailers in shopping centers	Self-service stores of superettes	Supermarkets and the like
Distance from home	F	F	V	V	D	D
Personalized attention	F	F	V	V	D	D
Prices	D	D	D	V	V	F
Informal credit	F	F	D	D	D	D
Opening hours	F	D	D	V	D	D
Cheap lower-quality and/or lesser-known products	F	F	F	V	D	D
Sales in amounts smaller than those of conventional packaging	F	F	D	D	D	D
Cold storage: makes up for lack of a refrigerator in the home	F	D	D	V	D	D

Source : Prepared by the authors.

Note: F = Favourable D = Unfavourable V = Variable

Supermarkets²²

This type of commerce has developed along the lines of its United States counterparts, with big areas ranging from 300 square metres to over 1,300 square metres (hypermarkets or shopping centres), with self-service, the incorporation of modern technology, and heavy investment in infrastructure for each unit of employment.

The development of supermarket chains has tended to bring about drastic and growing changes in the food marketing circuits of the region: unlike small shops, the big distribution firms buy directly from producers without going through wholesalers or other complex and costly marketing circuits. Furthermore, the high sales volumes, together with the rapid rates of rotation of products, enable them to pay off their fixed costs more quickly (Green and others, 1991, pp. 292-295 and 298-299).

From being only a marginal actor, the supermarkets have now become a major force in the food market: in Guatemala their total market share rose from 15% in 1994 to 34% in 2001, while in Costa Rica it rose to 50% and in El Salvador to 37%.

So notable has been the growth of supermarkets that their local purchases of fruit and vegetables are coming close to matching the non-traditional exports of the region, which were of the order of US\$ 600 million (excluding bananas), while the supermarkets' sales are of the order of

²² See Reardon and Berdegue, 2002.

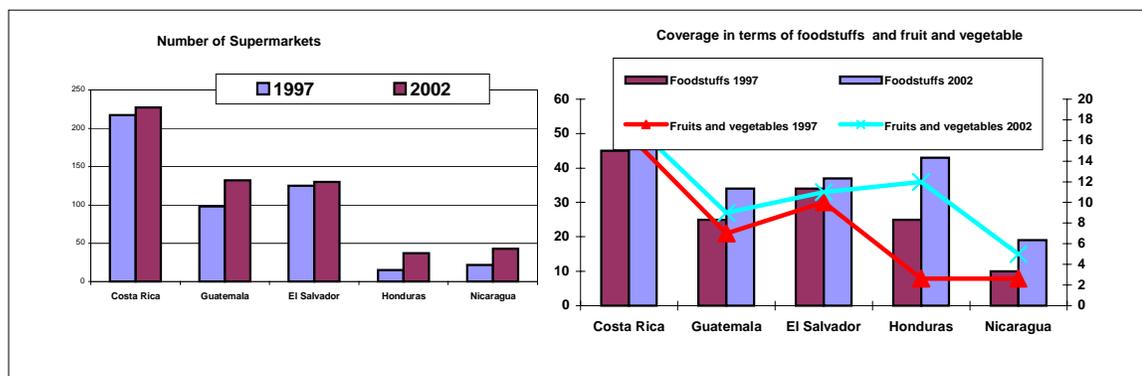
US\$ 180 million and are growing fast; indeed, if Costa Rica, which has the greatest weight in exports, is excluded, the supermarkets' sales represent practically half of the total value of exports.

By mid-2003 it was estimated that there would be 600 supermarkets in Central America, which is equivalent to 17 supermarkets per million persons, although this is only half the level of Argentina. Five years ago, the weighted average of the supermarkets' share in food distribution was 28%, and this rose rapidly to 36% at present, although this is quite low compared with the figure of 55% for South America. A noteworthy case is that of Guatemala, where the present rate is 34%, compared with only 25% in 1997 and 15% in 1994.

Supermarkets have been expanding throughout the past decade and have progressed from being a niche market focused on the richest consumers in the capital cities to a growing presence in lower-class areas, medium-sized cities and even small towns with 10,000 to 25,000 inhabitants. Indeed, the rapid growth of the main supermarket chain in Central America has been in types of markets focused on the lower-income sectors.

A third aspect is the high level of concentration displayed by the chains, with the biggest chain in each country having a share of between 54% and 58% in food distribution. These levels of concentration mean, for example, that one out of every four quetzales spent by Guatemalans on food is spent in the Central American Retail Company (CAHRCO), while the corresponding figure for Costa Rica is one out of every three colones. These figures eloquently illustrate the effect that the development of supermarkets will have on the food systems of the Central American countries in the immediate future.

Figure 24
CENTRAL AMERICA (5 COUNTRIES): NUMBER AND COVERAGE OF SUPERMARKETS, 1997-2002



Source: Berdegué y Reardon, 2003.

The share of the supermarkets in the distribution of fruit and vegetables is much smaller than in the food sector as a whole (10% compared with 36%). Even so, if the tendencies in the region hold good, it is very likely that the amount of fruit and vegetables purchased by supermarkets will exceed the amount exported, as indeed occurs in the rest of Latin America, where purchases from local producers are 2.5 times greater than exports to the rest of the world.

Although so far the effective demand by consumers who want better quality in fruit and vegetables is very weak or non-existent, quite apart from the aspects of appearance and taste, quality standards are beginning to play a growing role in the supply offered by the supermarket chains with the aim of expanding their market share by increasing the differences in quality and reducing prices compared with traditional markets. In order to achieve this objective, several chains have given up the old systems of supply based on purchases from traditional wholesalers and are

adopting four supply formulas: (i) the use of specialized agents; (ii) centralized supply through passive or active distribution centres; (iii) assurance of consistent quality through preferential suppliers, and (iv) assurance of quality and safety through mechanisms imposed by the suppliers themselves.

The “La Fragua” chain in Guatemala has progressed from 32% of centralization in 2001 to 78% in 2003, and the Corporación de Supermercados Unidos (CSU) of Costa Rica is now practically 100% centralized. La Fragua decided to go one step further, and in July 2003 it established a formal seal of quality and safety, “País”, which is accorded to producers who agree to sell their products with that seal only to La Fragua, after passing a test or certification process by a third-party organization, the Programa Integral de Protección Agrícola y Ambiental (PIPAA), joint public-private certification body which arose as a result of the crises which prevented exports to the United States.

Another strategy of the CSU supermarket chain (part of the regional chain CAHRCO), which controls 80% of the supermarket sector in Costa Rica, is the establishment through its subsidiary Hortifruti of a system of technical assistance for its suppliers. Up to only seven years ago, Hortifruti only bought products in the traditional wholesale market, for redistribution through the CSU supermarkets, but in the last two or three years it has practically abandoned procurement through the traditional channels and has set up a network of some 200 preferential suppliers which includes direct producers. In this way, it has obtained the Blue Seal from the Costa Rican government for the use of low levels of pesticides.

D. Food policy

So far in this document we have presented the main characteristics and background data which describe the situation of the Central American countries with regard to the objective of achieving food security both from the standpoint of the population affected by food insecurity and from that of the available supply. In this section, we will now discuss the areas of action of food policy and the steps taken both independently and through international aid to attain a situation of food security.

1. The objectives and characteristics of food policy

It has been stated that the objective of food policy is to help in overcoming the food insecurity of the population,²³ in other words, to try to ensure that all persons, at all times, have physical and economic access to sufficient safe and nutritious food to satisfy their nutritional needs and food preferences so as to be able to lead a healthy and active life.

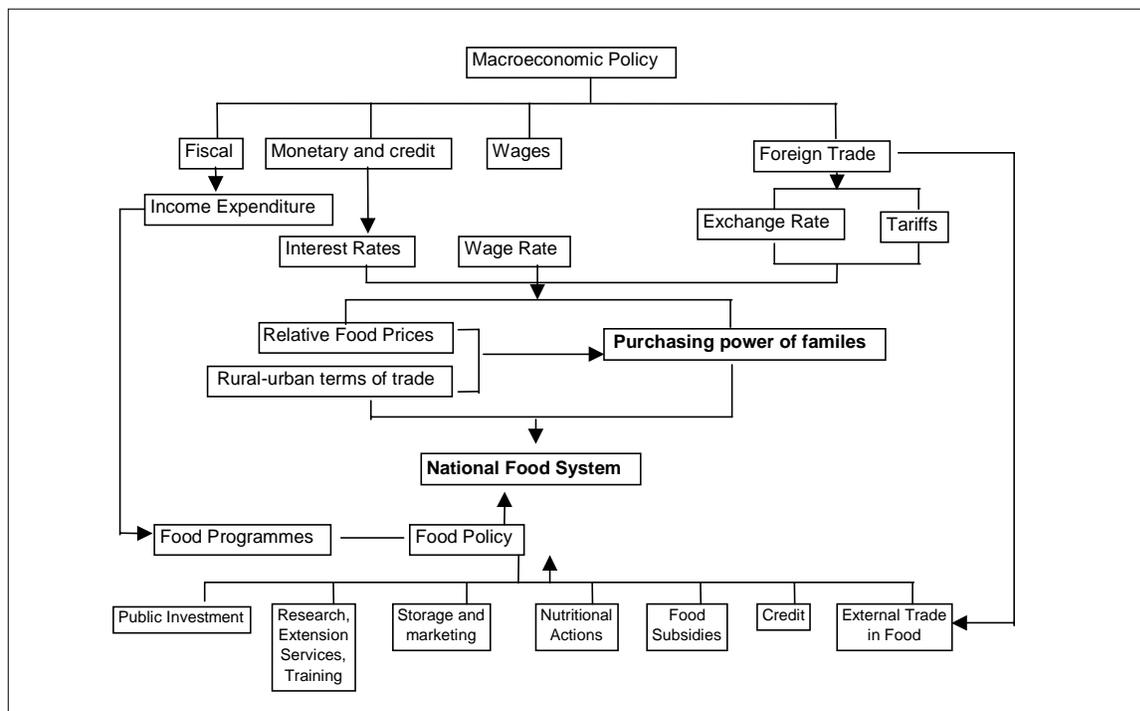
In view of the dimensions of food and nutritional security (FNS), achieving this objective involves satisfying conditions regarding the aggregate *availability* of food and ensuring *access* to food by those who are unable to express their food needs in the form of market demand.

²³ We speak of helping to overcome rather than overcoming because the latter objective depends on factors that are outside the ambit of food policy itself and may even involve the national development style.

In the case of Central America, an FNS policy would be expected to take into account the problems of sufficiency, stability, sustainability, safety and autonomy. In most cases it would only need to complement or correct the effects of the main macroeconomic variables on food availability and access. These variables are closely linked with fiscal, monetary and credit, wage and foreign trade policies, which have such a significant incidence in the relative prices of foodstuffs, the urban-rural terms of trade and the purchasing power of consumers. Figure 26 below gives a schematic diagram of the links between the main “macroeconomic prices” and the various components of the food system.

Figure 25

LINKS BETWEEN MACROECONOMIC POLICY AND FOOD POLICY



Source: Prepared by the authors.

The structural reforms and external openness policies which have been applied have gradually reduced the capacity of public policy to influence food supply patterns because, for better or worse, many of the instruments used in the past, such as subsidies, differential exchange rates, exemptions, the purchasing power of State enterprises, price fixing for staple goods, etc., have practically disappeared and sectoral policies are now subordinated to the achievement of macroeconomic balances.

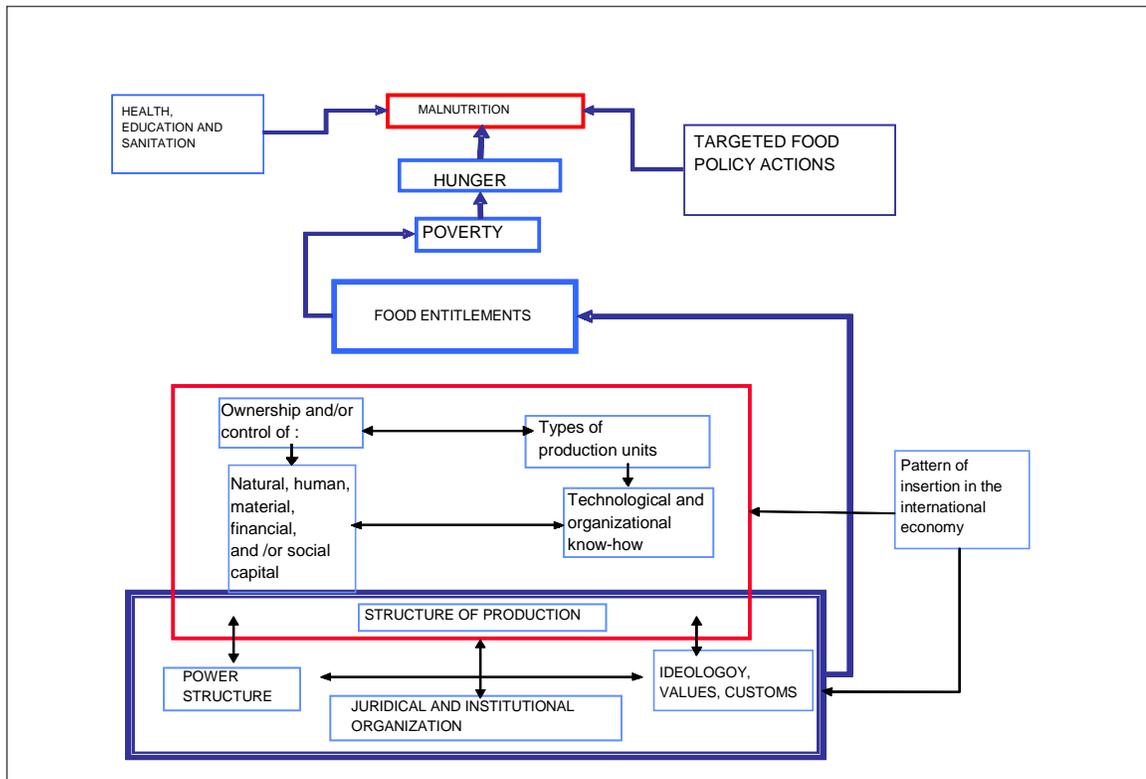
In contrast, the private agents in the last links of the food production-distribution chains now play an increasingly important role in deciding what is produced, and even how and by whom, to satisfy the food needs of most consumers. This is so, for example, in the case of the supermarkets, as already noted.

In this context, public policy must start by accepting those tendencies and taking advantage of their modernizing effects while at the same time promoting formulas to prevent the exclusion of small producers and regulate some contractual practices arising from the monopsonic nature of the supermarket chains and mergers and acquisitions that reduce competition.

Although poverty and indigence are the main causes of hunger and undernutrition, there are also other factors which mean that, for given levels of income and energy/protein intake, there can be nutritional deficiencies caused by high rates of morbidity, micro-nutrient deficiencies and deficient sanitary conditions and practices. At the same time, a low energy intake level may not be reflected in undernutrition because of mechanisms that adapt people's conduct to low levels of food intake (James and Schofield, 1990, pp. 91-96).

Figure 26

STRUCTURAL DETERMINANTS OF POVERTY, HUNGER AND MALNUTRITION



Source: Modified version of Schejtman, 1994.

In figure 26, undernutrition is shown to be the immediate result of hunger, of shortcomings in the areas of health, education and household facilities (especially drinking water, sanitation, etc.), and of the way the available food is distributed within the family. Hunger, for its part, is shown as the consequence of lack of access rights (“entitlements”), which are themselves the result of poverty.

Despite the structural nature of the determinants of poverty and hunger, targeted nutritional actions and others which increase food entitlements through transfers can reduce hunger or undernutrition, but they would need to be maintained in effect indefinitely in order to prevent the recurrence of these problems. If the structural problems which gave rise to them persist, nutritional actions and transfers must be applied as part of strategies designed to increase the capacity and opportunities of poor families to attain self-sustaining status, which means that, except in the case of temporary emergency situations, such actions must be integrated into strategies for medium- and long-term change.

In view of the wide range of factors affecting the determinants of food and nutritional security, it seems reasonable to take into account three levels or ambits of intervention, each with their own measures and rules: the macro, meso and micro levels.

2. Food and nutritional security (FNS) policies at the macro level

Actions at the macro level are linked on the one hand with the macroeconomic variables themselves, and on the other with aspects relating to the regulation and stimulation of the behaviour of the main private agents in the food system.

Briefly, the measures or lines of action which are possible in this field are generally measures aimed at the reallocation of resources to improve food availability and access through: (i) improvements in the relative weight and structure of social expenditure in the budget; (ii) guidelines for investments in infrastructure; (iii) fiscal incentives or transfers designed to reorganize the food production and distribution structures; (iv) stimulation of the dissemination of technical progress in the various spheres of activity that make up the food system; (v) redefinition of the pattern of insertion in the international economy in the aspects affecting food supply and demand (price bands, protection from dumping, criteria for regulating the distorting effects of food aid, etc.); and (vi) the establishment of norms and standards regulating food quality and safety.

Although some parts of the policies relating to the problem raised by the dominant role of the supermarkets have to do with the meso-type measures which will be discussed below, there are other parts which are of a more general nature, such as: public or joint public and private investment in the development of laboratories to reduce the cost of services to appraise and qualify the safety of food products, not only for export but also for the domestic market, since this cost represents a significant burden for small producers; reduction of barriers to the movement of goods among the countries of the region in order to “increase the possibilities for the regionalization of supply systems”; development of technology transfer systems very different from those prevailing in the past, which were designed rather to ensure that production process standards correspond to those laid down by the supermarkets or by the public regulations to which the latter might be subject; and the promotion of programmes such as that which gave rise to a joint public-private body formed by the Ministry of Agriculture of Guatemala and the Trade Association of Exporters of Non-Traditional Products (AGEXPRONT).

3. Meso policy: local development of food and nutritional security (FNS) in rural areas

It is proposed that a rural local development (RLD) strategy should be established for the achievement of FNS, having its starting point in, or, if preferred, being structured around, local development strategies which would be of an eminently rural nature in view of the characteristics of the countries concerned.

RLD has been defined as a process of productive and institutional change in a given rural area, aimed at the reduction of poverty.²⁴ It is therefore a process based on two pillars or components which must be addressed simultaneously: changes in production patterns and changes in institutions.

If we look back at the various attempts to initiate and define food security policies, even before the International Conference on Nutrition and the World Food Summit, we see that there is a certain disparity between the intentions formulated in the strategies and the concrete actions resulting from the policies implemented. To some extent, the contradictions between the very broad and all-embracing definitions contained in the FNS strategies whose preparation was entrusted to certain ministries and the parallel rural and local development policies formulated by other

²⁴ Schejtman and Berdegué, 2003. This section of the present document is based on a synthesis of elements from chapter 3 of the cited work, except for the references to FNS.

ministries ended up by weakening operational capacity in both these spheres, whereas, as a number of documents and especially the recent evaluations made by the European Union show, the existence of objectives and instruments which are common to both strategies or policies seems to suggest the need and also the possibility for a more integrated type of formulation: “FNS is an element integrating local development with the various actors involved, as shown by INCAP’s experience at the municipal level” (European Union, 2003).²⁵

In the document in question, the European Union notes that the recent accumulation of a new type of disasters – such as Hurricane Mitch in inland areas and on the Pacific side of the subregion, the frequency of the El Niño phenomenon, climatic change or recurring droughts, and unpredictable disasters such as earthquakes – has given rise to an incipient prevention culture, with a proliferation of cartographic analyses which are not integrated with each other. The challenge in this matter is not to generate new sources of information but to obtain more spatial studies of food and nutritional security phenomena.

RLD/FNS takes food and nutritional security as a central element integrating changes in production patterns with changes in the institutional system in a given space. Such a space becomes a territory when the agents of the process of change recognize that this is necessary in order to contain and delimit the relations among them within the space and between all of them and the “outside world” as a function of the development projects or objectives which it is proposed to pursue. “In other words, the territory of each rural development process is a social construct”.

The identity-generating element which brings the public and private agents together in this case is the achievement of a territory free from food insecurity: an objective function which makes it possible to differentiate the degrees of territorial vulnerability and link up with other yardsticks such as the degree of development of the process of change in production patterns and the state of advance of a system of institutions which will help to avoid exclusion, in order to establish a typological list of territories as a basis for the design of differentiated policies.^{26,27}

Some of the guiding considerations for territorial development are perfectly adaptable to RLD/FNS, such as for example:

- changes in production patterns and institutional development must be addressed simultaneously, with the reduction of food insecurity as a guiding objective;
- programmes must operate with a broader concept of what is “rural” which goes beyond the assumption that “rural” means the same thing as “agricultural” and incorporates intermediate urban centres into the rural territory;
- for the programmes, the territory is a space with its own identity and a socially agreed development project centered on the elimination of food insecurity;
- programmes must explicitly take account of the heterogeneity between territories and must design differentiated strategies as a function of this;
- programmes must take account of the diversity of agents in the territory. Overcoming indigence and undernutrition necessarily means involving the non-poor also in alliances

²⁵ This European Union report considers that FNS is not something radically different from rural development, but in each of its various stages this concept has coincided with some models on rural development and not with others. It is therefore important that the current approach to FNS, because of its potential for integration at the highest level (both logical and political), should be taken into account in the national development strategies of the countries of the region and in regional integration policies, as social integration policy now is.

²⁶ The World Food Programme’s efforts to prepare indicators and procedures for the analysis of vulnerability, such as the Vulnerability Analysis and Mapping (VAM) Unit, are undoubtedly a valuable contribution in this sense.

²⁷ An interesting case in this respect is the project for the integrated development of border municipalities, which seeks to improve the quality of life of the population and to help establish solid bases for the sustainable development of cross-border territorial units in Central America which have a high degree of social vulnerability.

and networks in order to give rise to processes of changes in production patterns that the poor cannot achieve alone;

- programmes must take account of the combinations that can be made among the four possible ways out of poverty: agricultural, non-agricultural, migration and the various permutations of these means;
- programmes require a complex system of institutions, that is to say, a combination of formal and informal organizations and institutions which will make possible networks and alliances among private agents and between them and the public agents which will permit the building of identities, consensuses and a greater degree of inclusion; and
- RLD programmes must be formulated and implemented with a medium- and long-term approach, since the stable and self-sustaining elimination of poverty and food insecurity will require medium- to long-term lead times.

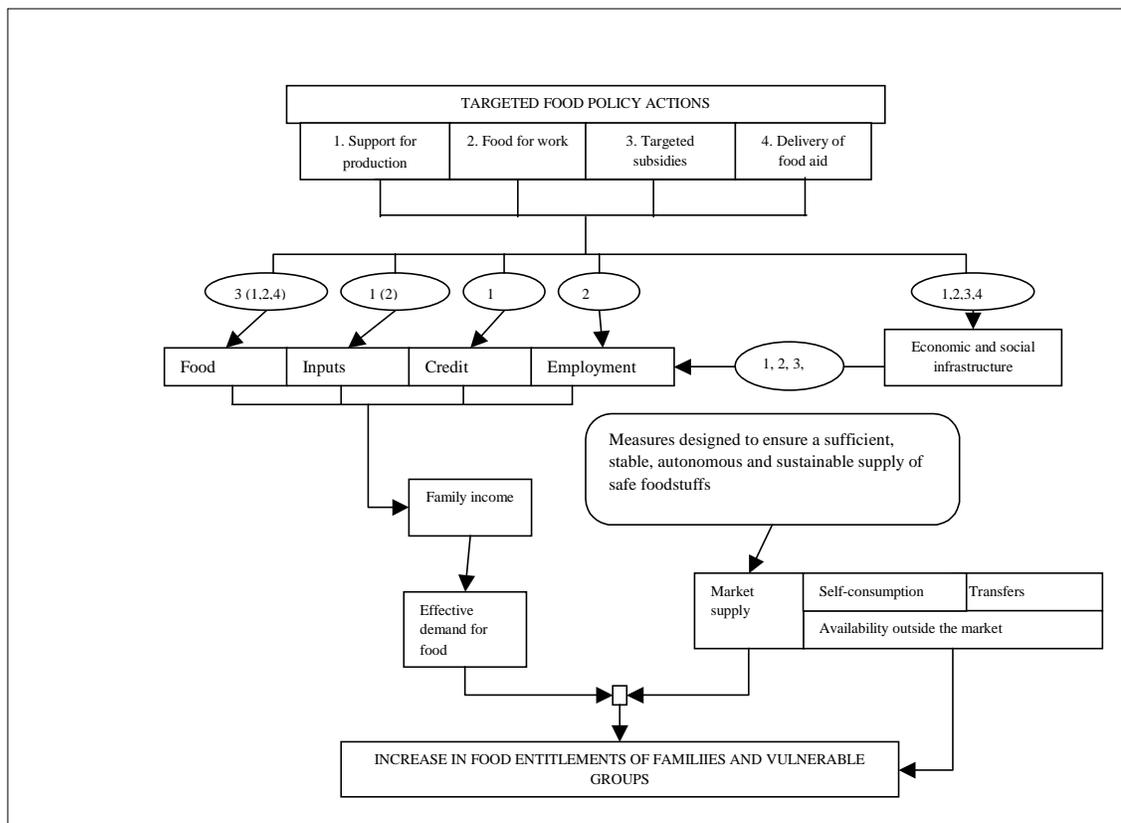
4. Food and nutritional security policy at the micro level

This refers basically to measures that have a direct effect on families or individuals. This is the area in which the greatest progress has been made and in which valuable experience has been built up over many decades, especially by INCAP and the World Food Programme, so that what needs to be done in this connection is to make a systematic analysis which will enable us to draw up a list of the lessons learned so that they can help to improve FNS policies at the micro level.

As may be seen from figure 27 below, the main areas of action of food policies at this level call for a high degree of targeting on the most vulnerable population groups and should be centered on support for production, work-related monetary and food incentives, and the direct distribution of food.

Figure 27

MICRO POLICIES FOR FOOD AND NUTRITIONAL SECURITY



Source: Modified version FAO, 1996.

5. National food and nutritional security policies

Although they have different levels of juridical security in this respect, all the countries of the region now have a political authority at the central government level – responsible for consideration of these matters – and a plan of action, and almost all of them have national policies. Three countries of the region, however (Costa Rica, Guatemala and Nicaragua) have some degree of juridical security based on laws that have been adopted or are in course of adoption.

Table 12
CENTRAL AMERICA (6 COUNTRIES) AND PANAMA: PRESENT STATE OF THE FOOD AND NUTRITIONAL SECURITY (FNS) INITIATIVE IN THE INCAP MEMBER COUNTRIES

COUNTRY	POLICY	PLAN	LEGISLATION	COMMITTEE OR TECHNICAL COMMISSION
Belice	X	X		X
Costa Rica	X	X	X	X
El Salvador	X	X		X
Guatemala	X	X	X	X
Honduras		X		X
Nicaragua	X	X	X	X
Panama		X		X

Source: INCAP, 2003c, "Grado de avance de la iniciativa de Seguridad Alimentaria y Nutricional en los países miembros del INCAP", Guatemala, September, 2003.

In Belize, the national FNS policy derives from work done in the mid-1990s which led to the Daringa Declaration (1997), when the government presented a national FNS policy and plan of action. This was officially adopted in February 2001 and provides for a commission responsible for its implementation, presided by the Minister of Agriculture.

In Costa Rica, the institution responsible for these matters is the National Food and Nutritional Security Policy Secretariat, which is provided for in the 1973 organic law on the Ministry of Health and is responsible for carrying out the National Food and Nutrition Plan (PLANAN) approved in 1992. The functions of this Secretariat include “analyzing and interpreting the available information on the food and nutritional situation of the country, promoting the formulation of a national food and nutrition policy compatible with the National Health Plan, coordinating the national food and nutrition policy with the national policies for the agricultural and industrial sectors, and maintaining close intersectoral coordination between the planning, programming and executive activities of the National Economic and Social Development Plan and its specific programmes and projects, as well as stimulating the execution of the plans and projects forming part of the national food and nutrition policy”.

El Salvador has a Food and Nutritional Security Policy which forms part of the Government Plan and includes among its objectives: increasing the availability of food, improving access to it, providing guidance on balanced diets, strengthening the biological utilization of food, and implementing an information system for monitoring the food and nutritional situation. It also has a National Food and Nutrition Plan and a National Commission on Food and Nutrition (CONAN) responsible for the technical implementation of the Policy, to be coordinated by the Ministry of Health.

As may be seen from table 13 below, there is a variety of areas in which actions, projects and programmes relating to food and nutritional security are being carried out in El Salvador.

Table 13
POLICIES AND ACTIONS IN EL SALVADOR

DEVELOPMENT PLAN	Government Programme "La Nueva Alianza", 1999-2004, based on four main elements: (i) employment through agriculture, small and medium-sized enterprises (with up to 100 workers), and exports; (ii) <i>local development</i> , decentralization, participation; (iii) citizen security; (iv) forward-looking measures for a sustainable future. → Territorial-level actions under the National Plan in 5 major regions with, in each one, (i) connectivity; (ii) sustainable development of production; (iii) urban settlements; (iv) <i>local development</i> .
RECOVERY PLAN	Reaction to earthquakes: in general, basic reconstruction and rehabilitation measures, but with the aim of <i>integration into local economies</i> .
FOOD SECURITY POLICIES	Ministry of Health formulated in 2002 a proposed FNS policy with intersectoral participation, but it was not officially adopted. It includes all the elements of the FNS concept and proposes a monitoring system. It proposes to reactivate the 1981 CONAN with 10 representatives of ministries and its SECONAN, as an executive secretariat and coordinating body with the private sector and the NGOs. Network of 1,711 health promoters to follow up the development of children under 5 and SIBAIS with 28 digitalized follow-up units.
FOOD SUPPORT PROGRAMMES	Ministry of Health: nutritional attention for preschool children and expectant and nursing women. Ministry of Education: "Healthy Schools" programme, which provides light school meals, the "Nutriendo con amor" programme of the First Lady, and an aid programme for those affected by the coffee crisis (Auechapan). World Food Programme (WFP): at the school level, aid for 200,000 children in 4 departments, plus aid for the coffee crisis and pilot actions in preschool centres. USAID: at the school level, aid in 4 departments.
RURAL DEVELOPMENT POLICIES	In 1998, the Committee on Rural Development published outline proposals for action within the framework of the National Plan, but they were not adopted. The Ministry of Agriculture and Stock-raising produced documents on the FNS situation; promoted the construction of 36,000 silos for post-harvesting use; PROCHALATE projects (33 municipalities in Chalatenango); PRODAP (micro-enterprises and the environment); PRODERNOR (26 municipalities in Morazán and 7 in La Unión); National Centre for Agricultural and Forestry Technology (CENTA) (technology) to aid 63,000 hillside producers, and rehabilitation of 100,000 farms after Hurricane Mitch. Salvadorian Institute for Agricultural Change (ISTA) transfers 450,000 hectares to 950,000 beneficiaries; now to concentrate on training. Ministry of the Environment and Natural Resources (MMARN): evaluation of impact of the forestry plan.
NATIONAL PLAN OF ACTION AGAINST DESERTIFICATION AND DROUGHT	
LOCAL DEVELOPMENT POLICIES	No law on decentralization, but municipalities receive 6%, to be increased to 10%. <i>National Local Development Strategy (ENDL)</i> : lays stress on the economy, the environment and disaster prevention, but does not take account of FNS.
RISK PREVENTION POLICIES	There is a National Emergency Committee (COEN) which acts after emergencies, like the old civil defence system. Ministry of the Environment and Natural Resources: the National Territorial Studies Service (SNET) produces maps on potential threats and vulnerability at the departmental level. In the field of territorial management, there is a Plan for Territorial Planning and Management, with 36 micro-regional units as a <i>territorial development framework</i> .

Source: Prepared by the authors on the basis of European Union, 2003.

Note: Firms that hired up to 100 workers.

In Guatemala, after some efforts which did not succeed in obtaining political and juridical expression, in 2001 a draft Food and Nutritional Security Law was presented which includes the establishment of a National Council (CONSAN) to be responsible for coordinating national policy in this field. Early in 2003, this responsibility was assigned to the Deputy Minister for Food Security of the Ministry of Agriculture and Stock-raising (United Nations, 2003).²⁸ The policy objectives include: heightening of awareness of institutions, unification of criteria for an integrated and sustainable approach, coordination of the efforts of the institutions involved, definition of responsibilities, establishment of an order of priority for the planned actions, and identification of the needs in terms of human resources and finance for the design and execution of plans, programmes and projects.

Table 14 below shows the institutions and areas of action in which work is currently being done on this matter in Guatemala.

²⁸ *Análisis de la Situación Alimentaria Nutricional de Guatemala*, 2003.

Table 14
POLICIES AND ACTIONS IN GUATEMALA

DEVELOPMENT POLICIES AND PLANS	<ul style="list-style-type: none"> Government Plan 2000-2004. In order to finance it, 131 organizations sign a "fiscal covenant". VAT increased to 12%, a quarter of which is to be used for FNS.
POVERTY REDUCTION STRATEGY (PRS)	<ul style="list-style-type: none"> PRS for the 2002-2005 period (minor overlaps with the N1 plan); (i) <i>rural bias</i>, (ii) emphasis on public management, (iii) promotes <i>decentralization</i>, and (iv) participation. 6% of investment to go to education and health, especially FNS. PRS targeted on 120 municipalities out of the total of 332 in the country. Some references to distribution of land as part of the PRS.
FOOD SECURITY POLICIES	<ul style="list-style-type: none"> National FNS policy, 2001: only general lines and organizational charts, no concrete actions or finance. Takes the <i>municipalities as basic units for intersectoral FNS actions</i>. National Council for FNS proposed (CONSAN): 5 ministries, 7 international organizations, plus an advisory group. 2001: formulation of an FNS Law establishing CONSAN, but not yet approved as at May 2003. CONSAN cancelled in 2003 and replaced by the Under-Ministry of Food of the Ministry of Agriculture and Stock-raising (MAGA). FNS Board set up with 22 institutions; only one meeting held.
HEALTH/ NUTRITION POLICIES	<ul style="list-style-type: none"> Ministry of Public Health and Welfare (MSPAS), through its food and nutrition department, carries out: (i) monitoring of the nutritional state of children under 2 (issued a warning in 2001); (ii) prevention and control of micronutrient deficiencies; (iii) fortification of foodstuffs; (iv) promotion of breast feeding and infant feeding; (v) food education, with manuals. 2001 emergency: census of children's height carried out, and children with deficiencies treated in nutritional recovery centres of 102 municipalities
FOOD SUPPORT PROGRAMMES	<ul style="list-style-type: none"> Ministry of Education (MINEDUC): school breakfasts with <i>incaparina</i> CONSAN (while it still existed) provided school lunches in 35 municipalities WFP covers 37 municipalities and gives support during the emergency. Plans to reach 250,000 beneficiaries by 2004 through a series of projects. (i) preschool children and babies, in collaboration with MINEDUC and the First Lady's aid programme; (ii) schoolchildren, in collaboration with MINEDUC, in 19 municipalities; (iii) reincorporation of migrants, in collaboration with the National Fund for Peace (FONAPAZ); (iv) reforestation, in collaboration with FIS-DL; (v) food aid in 88 of 102 priority municipalities, with support in 60 of them for the Nutritional Recovery Centres (CRN), in collaboration with the Ministry of Health (MINSAL) and community distribution centres. USAID, CARE, CRS, SHARE and Save the Children. MAGA: School Attendance Bonus of 1 to 2 quetzales per child in 41 municipalities, financed from national resources.
RURAL DEVELOPMENT POLICIES	<ul style="list-style-type: none"> Policy proposal involving intersectoral boards with a <i>broader rural approach</i>, not solely agricultural. Diagnostic study emphasizes food vulnerability; criticizes centralism in the management of multiple funds; Institute of Agricultural Sciences and Technology (ICTA) found to be weak, with no extension activities; FONTIERRAS lacking in functionality. Diagnostic study of Civil Society denounces famine due to the coffee crisis and formulates a more radical proposal with redistribution of coffee-growing land. National Coordinating Body of Peasant Organizations (CENOC) proposes integral reforms and food sovereignty. FAO Special Programme for Food Security
LOCAL DEVELOPMENT POLICIES	<ul style="list-style-type: none"> Advanced decentralization, with substantial transfers of funds to municipalities Development of federated communities Municipal Development Institute (INFOM) and Association of Municipalities (ANAM)
RISK PREVENTION POLICIES	<ul style="list-style-type: none"> National Coordination Centre for Disaster Reduction (CONRED) and a well-equipped emergency operations centre Risk Reduction Initiatives (INSIVUMEH) for basic information MAGA establishes a geographical planning and risk management unit.

Source: European Union, 2003.

In Honduras, the office of the president-designate began work in 2003 to establish "a frame of reference for the construction of food and nutritional security policies" in which all sectors, including ministries, municipalities, universities, international organizations and non-governmental organizations, will participate in order to endow it with an integral analytical approach.

Table 15 below shows that the fields of work and institutions involved in food security programmes are very varied, covering different aspects of the problem.

Table 15
POLICIES AND ACTIONS IN HONDURAS

GOVERNMENT PLAN 2002-2006 MASTER PLAN FOR NATIONAL RECONSTRUCTION AND CHANGE (PMRT)	<ul style="list-style-type: none"> The plan includes the PRS, involving organization of the public administration system and includes <i>decentralization</i>, the National Decentralization and Development Programme (PRODEL) and the <i>National Territorial Reorganization Programme (PRONOT)</i> PMRT 1999, after Hurricane Mitch.
NATIONAL SUSTAINABLE DEVELOPMENT STRATEGY (ENDS)	<ul style="list-style-type: none"> ENDS (2001), based on <i>micro-basins</i> as units, is formulated almost as another development plan
POVERTY REDUCTION STRATEGY (PRS)	<ul style="list-style-type: none"> PRS (2001): has 2015 as its horizon and uses an improbable growth hypothesis (5%). Advisory Council for Poverty Reduction established. Advisory body for the Social Cabinet: special fund set up, together with a secretariat or Institutional Technical Group (GTI) at the level of the Office of the President. Strategy updated in 2003 under threat of suspension of support from the International Monetary Fund. 80 rural and 7 urban municipalities given priority on the basis of WFP indicators, out of a total of 298.
FOOD SECURITY POLICIES	<ul style="list-style-type: none"> No explicit FNS policy, but all the required elements exist Government not interested in an FNS policy, but the ministries act in line with the elements of such a policy. President-Designate prepares an FNS policy with the support of the FAO's Special Programme for Food Security Ministry of Health receives support for an Information Network for Food and Nutritional Monitoring Systems.
RURAL DEVELOPMENT POLICIES	<ul style="list-style-type: none"> Ministry of Agriculture and Stock-raising (SAG) State Agricultural Policy Board (20 key crops) Rural Development Law based on an intersectoral approach Agricultural Board prepares a policy for agriculture 2003-2021 National Sustainable Rural Development Programme (PRONADERS): develops 18 projects, many aimed at small producers (95,000 families) Land property title issue process, in collaboration with the World Bank and the European Union
HEALTH AND NUTRITION POLICIES	<ul style="list-style-type: none"> Healthy municipalities programme and <i>agreements with communities</i>; "Healthy Schools" programme Proposal to establish a Food and Nutritional Monitoring System (SISVAN) WFP nutrition surveys, with better information processing than in other countries of the region
FOOD SUPPORT PROGRAMMES	<ul style="list-style-type: none"> Social security network with Family Allowance Programme (PRAF); IDB: school attendance compensation allowance Great interest of the President in promoting the school lunch programme to reach 1 million children (WFP, 300,000) WFP + MINSAL: support for women and for children under 2; for schoolchildren; food-for-work in 33 municipalities with 18,000 beneficiaries; WFP + MINEDUC: programmes benefiting 225,000 schoolchildren; WFP + Honduran Forest Development Corporation (CODEHFOR): 50,000 beneficiaries.
RISK PREVENTION POLICIES	<ul style="list-style-type: none"> Standing Contingency Commission (COPECO) in course of modernization after Hurricane Mitch Establishment of Multisectoral Drought Committee (COMUS): intersectoral action to forestall the effects of droughts, with the support of the WFP for FNS of the persons affected
LOCAL DEVELOPMENT POLICIES	<ul style="list-style-type: none"> Intermediate-sized cities: two corridors, North and South Under-ministry of the Ministry of the Interior undertakes local development actions through PRODEL Preparation of territorial planning Association of Municipalities of Honduras (AMHON) very active

Source: Prepared by the authors on the basis of European Union, 2003.

Since the year 2000, Nicaragua has had a new Food and Nutritional Security Policy, prepared with the participation of all the institutions of the State, civil organizations and international cooperation agencies and coordinated by the Ministry of Social Action. Its execution has been entrusted to the National Food and Nutritional Security Commission (CONASAN), which includes ministries and State institutions and has a Technical Committee (COTESAN). CONASAN has prepared a Plan of Action for the Policy for the 2001-

2006 period which contains a detailed definition of the objectives, goals and responsible bodies for its different fields of action. The areas of work covered by the policy are quite exhaustive and form an integrated scheme. Among the 25 main lines of the policy, special mention may be made of the following: “to create an information and follow-up system for food and nutritional security, to increase food production, to improve the self-management capacity of individuals and communities at risk, to incorporate the FNS programme into the network of anti-poverty policies, and ... to strengthen and expand supplementary food programmes aimed at the vulnerable population and at groups at risk (children under 5 years of age and pregnant and nursing mothers)”. A draft law is currently being discussed which, if adopted, will give the policy greater juridical stability.

Table 16 below summarizes the main areas of work and actors relating to food security in Nicaragua.

Table 16
POLICIES AND ACTIONS IN NICARAGUA

STRENGTHENED ECONOMIC GROWTH AND POVERTY REDUCTION STRATEGY (ERCERP)	<ul style="list-style-type: none"> Initiative for Highly Indebted Poor Countries (ERCERP), with insufficient final participation in view of the HIPC, accepts the Millennium Goals. Emphasis on FNS elements (nutrition rather than system). Discussion in two councils: the Economic and Social Planning Council (CONPES) and the Sustainable Development Council (CONADES)
NATIONAL DEVELOPMENT STRATEGY (END)	<ul style="list-style-type: none"> END in course of preparation, on the basis of the concept of <i>8 sets of economic branches and districts</i>: energy, tourism, meat, dairy products, fisheries and pisciculture, agro-industry, textiles and clothing, forestry and timber. Bias towards regions with greatest potential
FOOD SECURITY POLICIES	<ul style="list-style-type: none"> SAS (Social Action Secretariat) of national FNS policy defined in 2000 on a participative basis, with plan of action Organizational activities with the Food and Nutritional Security Technical Committee (COTESAN) on an intersectoral basis, with citizen participation Assignment of responsibilities by sector, law presented in the National Assembly
RURAL DEVELOPMENT POLICIES	<ul style="list-style-type: none"> Ministry of Agriculture and Forestry (MAG-FOR) made responsible for food availability and access Food security department established FNS policy reformulated, with development of aspects of food availability and access, entrusted with preparation of a food and nutritional security system (SISSAN) Various poverty reduction projects in collaboration with IDB (IDB-PAI, 11 municipalities); with UNDP (“green municipalities”), and with FAO Special Programme for Food Security
HEALTH AND NUTRITION POLICIES	<ul style="list-style-type: none"> Monitoring of nutritional state, but with very little coverage; prevention of micronutrient deficiencies and fortification of foodstuffs Promotion of breast feeding and proper child nutrition; food and nutritional education; Codex Alimentarius Commission Local FNS commissions in San Juan del Sur and other localities, in collaboration with INCAP
FOOD SUPPORT PROGRAMMES	<ul style="list-style-type: none"> Children’s dining rooms: 25,000 children in 64 municipalities; school meals for 200,000 children; pilot plan for a food allowance for schoolchildren Nicaragua has the largest WFP programmes in the region, covering 452,000 beneficiaries: (i) in collaboration with MINSA, benefiting 42,000 pregnant or nursing women and children under 2; (ii) with the Ministry of Education (MINEDUC) and Mi Familia, school meals for 95,000 children on a regular basis and 300,000 supplementary beneficiaries; (iii) with MAG-FOR, 80,000 beneficiaries under food-for-work programmes.
RISK PREVENTION POLICIES	<ul style="list-style-type: none"> Establishment of the National System for Disaster Prevention, Mitigation and Relief (SNPMAD) in the year 2000 in collaboration with all the institutions of the Executive, and of the Nicaraguan Institute of Territorial Studies (INETER), the Red Cross and the universities. This will be strengthened with a World Bank project.
LOCAL DEVELOPMENT POLICIES	<ul style="list-style-type: none"> Decentralization is proceeding at a slow pace, and with few transfers of resources to the municipalities, but it is being organized. The Nicaraguan Institute for Municipal Development (INIFOM) has been established for the strengthening of municipalities, with the Association of Municipalities (AMUNIC) as integrating body and the Emergency Social Investment Fund (FISE) for investment Interesting actions carried out in San Juan del Sur, with FNS as an integrating element; <i>Association of Rural Localities of the Southern Frontier (ASOSUR)</i> set up in 28 communities.

Source: European Union, 2003.

Panama has a Commission on the National Food and Nutritional Security Programme (PRONAN) in which various government bodies, NGOs and international cooperation organizations take part with a view to coordinating action on nutrition. In 1997 this Commission prepared the National Food and Nutritional Security Plan, 1998-2002, which integrates the strategies, programmes and projects in this field. The Technical Secretariat of PRONAN is located in the Department of Nutrition of the Ministry of Health and has two sub-commissions: on micronutrients and on Food and Nutritional Monitoring (SISVAN).

In view of the foregoing, it could be concluded that the countries of the region are in quite a promising situation as regards the level of political importance and juridical security attached to this problem. However, “although most of the policies and plans have been conceived in the light of the availability, access, consumption and biological utilization of food, emphasis is usually placed on biological utilization and consumption” “In many cases, in practice the coordination relations are not sufficiently coherent, particularly with production and access policies, and it is necessary to take into account such factors as macroeconomic policies, globalization, interregional trade and processes of modernization and decentralization of the State in order for the plans to have a more realistic conception of the problem and be politically and technically viable and economically feasible” (INCAP, 2003).

The implementation of FNS policies calls for the participation of many actors: government institutions (central government, departments and municipalities), bilateral and international cooperation organizations, banks, national and foreign NGOs, and the community.

Taking a global view, the role of government institutions is to define policies and design programmes, in which tasks they receive strong support from international agencies (WFP, FAO, INCAP, UNICEF, SICA) and donor countries. Finance for food comes partly from national budgets, banks (BCIE, World Bank and IDB) and to a significant extent from contributions by donor countries and agencies (especially the WFP and USAID). In the execution of operational tasks, assistance is received from national and international NGOs.

E. Food aid programmes

In the countries of the region, food aid programmes involving the distribution of food rations, subsidies, training and technical assistance operate with extensive participation by domestic and foreign public and private actors. The forms of coordination employed vary in each case, from almost total autonomy, even sometimes with some features of competition, to complete interaction and mutual dependence.

In each country there is a multiplicity of different examples of such programmes, some of them linked up with regional programmes while others operate independently. There are similarities, however, in that they all include school meal programmes, food programmes for infants and pregnant and nursing women, and community support for rural producers.

The following paragraphs describe some of the more important food aid programmes that exist in the Central American countries most severely affected by problems of hunger and undernutrition.

1. El Salvador

The most important national-level actions in the field of food aid are the School Meals Programme, the emergency projects, and the rural health and nutrition centres.

The programmes operate in line with a model based on the cooperation and participation of domestic and foreign public and private actors and international agencies. The role played by outside actors – that is to say, not belonging to Salvadorian State institutions –

in the implementation of the country's food aid programmes is quite important at the strategic, operational and financial levels. This is highly beneficial, insofar as it increases participation and generates resources, but it also involves risks, since it may mean less autonomy in the solution of the problem. The challenge is to manage to maintain a participative model while transferring food and nutrition responsibilities to government institutions, which requires economic and juridical stability, with long-term policies at the State level which are not subject to the will of the government in power.

a) The School Meals Programme

This is a component in the "Healthy Schools" programme, which "seeks to attend to the basic needs for health, education, food, nutrition and infrastructure of the student population of educational establishments in rural and marginal urban areas of the country". In other words, it forms part of a more integral strategy designed to serve children in kindergartens and in the first and second cycles of basic education.

The programme calls for extensive inter-institutional coordination among the Food Aid Division of the National Secretariat for the Family (DAA/SNF), and the Ministries of Education (MINED), Foreign Relations (MIREX), Public Health and Social Assistance (MSPAS), Agriculture and Stock-raising (MAG), Finance, and the National Water Supply and Sewerage Administration (ANDA). In addition, there are the organizations dealing with international aid (WFP and USAID), social affairs, and the school community.

Finance for the programme comes from the resources obtained from the privatization of ANTEL/FANTEL (54%) and donor organizations (46%), mainly the WFP and USAID.

The programme has two forms of attention:

- **Food:** this includes daily rations of canned meat, rice, beans, cooking oil and fortified beverages, equivalent to 23% of daily requirements, for the whole of the school year (180 days). These rations come from foreign donations administered by the WFP, and they are delivered to the schools for subsequent preparation by the children's parents. They are provided in four departments (Ahuachapán, Chalatenango, Cabañas and Morazán) and are expected to cover 684,500 schoolchildren.
- **Cash benefits:** these consist of an allowance of 12 US cents per child per day and are financed with funds from USAID and the privatization operations, which are transferred to the Communal Association for Education (ACE), a School Governing Council (CDE) or a Catholic Educational Council (CECE), to be used for the purchase and preparation of food in line with the enrollment of each school. The resources from USAID cover four departments (La Paz, San Vicente, Usulután and La Unión), while those from the State and from privatization operations cover six departments (Cuscatlán, San Miguel, La Libertad, San Salvador, Santa Ana and Sonsonate).

In the operation of the programme, participation and contributions in kind by parents are of fundamental importance. In order to improve the capabilities of these communities, a pilot project coordinated by the Food Aid Division (DAA) was designed with the aim of increasing productivity and income and building up community funds for the purchase of food. For this purpose, food rations containing 1,673 calories/day and 46.3 protein units/day are provided, on condition that the beneficiaries attend training courses and do community work, with technical assistance being provided by the WFP and the FAO, while training is the responsibility of NGOs (Plan International, Catholic Relief Service (CRS), Oxfam, World Vision and the Salvadorian Foundation for Economic and Social Development (FUSADES). During the period from 2003 to

2007, the WFP expects to work with 135 communities and 12,150 fathers and mothers, to supply 1,823 monthly food rations, and to train 4,050 persons in FAC management.

b) Emergencies

This corresponds to a set of rapid response projects to cover emergencies caused by natural disasters or economic crises. These are implemented jointly by the SNF, the WFP and various NGOs. At the operational level, the National Emergency Committee (COEN) and the National Territorial Studies Service (SNET) play a vital role in evaluating disasters, identifying the localities and communities that need help urgently, and organizing the distribution of such help. Other central government, departmental and municipal institutions also have a role to play in this.

An example of the way these programmes work is that corresponding to the earthquakes in January and February 2001. In the emergency stage, actions were carried out in 121 municipalities in 10 departments, 125,403 families received assistance, and 2,800 metric tons of food were distributed, with the participation of local governors, mayors, SNF, WFP, CARE, CRS, the World Lutheran Federation (WLF), Médicos del Mundo, Concern International, CIRES, FUSADES, and others. In the reconstruction stage, 19,440 metric tons of food were distributed among 40,000 families in 41 municipalities of 9 departments, with the aid of four executing NGOs (CARE, CRS, FLM and FUSADES).

The project to deal with the effects of the 2002 drought in the eastern part of the country is another important example of emergency assistance. In this case it was centered on 15,126 peasant families in 52 municipalities in the departments of La Unión, Morazán, San Miguel and Usulután, to whom food rations were distributed between August and December 2002. The executing agencies were CARE, CRS, FLM, the American Red Cross and FUSADES, PRODENOR/MAG, REEDES, Ayuda en Acción, the Salvadorian Red Cross, and the Asociación de Mujeres Salvadoreñas.

A third emergency worth mentioning is that generated by the international coffee crisis. This programme was implemented jointly by DAA/SNF, MSPAS and the WFP between November 2002 and December 2003 and was aimed at aiding children under 5 and pregnant and nursing women in the western coffee-growing areas. In the first eight months, 5,993 families in the departments of Ahuachapán and Sonsonate were provided with nutritional aid (rations of 1,160 kcal/day for children under 5 and 2,000 kcal/day for pregnant and nursing women) and with training in productive and income-generating activities for heads of household. The aim for the second half of 2003 was to provide assistance to 6,350 families. The NGOs taking part in this programme were CRS, the Maquilishuat Foundation (FUMA) and the Swiss Red Cross.

Some NGOs, such as CARE and CRS, carry out projects on an independent basis, but maintain coordination with DAA/SNF in the field work.

c) Rural health and nutrition centres

These operate as preschool centres for children between 2 and 5 from the most vulnerable rural sectors, where the children receive food, education and micro-nutrients and their nutritional state is monitored.

The information collected from official documents and interviews with local participants indicates that the actions to be carried out under programmes and projects are defined at the central level, while the municipal and local levels have a more operational role. The model could therefore be defined as being centralized at the strategic level – design and overall management – but decentralized at the operational level, where it is partly carried out by outside agencies (NGOs and social organizations).

At the same time, the management model is based on the active participation of national and outside organizations engaged in implementing food distribution and monitoring of the food and nutritional situation of the population aided. For the purpose of inter-agency coordination, there are standardized procedures for working with the NGOs, which use information collected in the field and checked by the DAA and WFP, as well as agreements between ministries, local governors, mayors and other State organs.

The WFP plays a preponderant role at the strategic level in view of its capacity for mobilizing financial and food resources from the Country Programme for school meals programmes and especially from the Protracted Relief and Recovery Operation (PRRO 6089) for emergencies, and it is responsible for following up the programme and providing technical assistance.

The domestic and foreign NGOs also play a central role. They not only contribute their operational capacity but also provide finance and make it possible to solve the strategic problem of selecting beneficiaries and distributing the aid (goods and services).

UNICEF, PAHO and FAO provide support in the fields of education, health assistance, food, nutrition and school vegetable gardens.

2. Guatemala

A characteristic element in food and nutritional policy-making in Guatemala is the marked variability of the decisions, taken due to changes of government. Each new government has put forward new ideas or brought back previous proposals, thus causing big variations in the strategies used and preventing the generation of a long-term structural line.

There is also great independence of action among the actors, especially among the NGOs that operate with external financing. This means that in some cases the work done seems to be guided by a desire for independence or competition than for integration and coordination.

The Nutrition and Food Department of the Ministry of Public Health and Social Assistance (MSPAS) has developed various programmes or components for preventing, controlling and handling food and nutritional insecurity problems of women and children: monitoring of the nutritional state, prevention and control of disorders deriving from micro-nutrient deficiencies, promotion of breast feeding and appropriate child nourishment, food and nutritional education, and programmes for the feeding of particular groups.

The MSPAS does not currently distribute food, but during the past decade the Department of Nutrition coordinated the direct distribution of food provided by the WFP and CARE among health services and the community, delivering individual monthly rations to pregnant and nursing women and children between the ages of 6 months and 5 years deemed to be undernourished on the basis of their weight for age.

The Ministry of Agriculture and Stock-raising (MAGA) has carried out various projects in the fields of the improvement of seeds and soils, crop diversification, food storage, marketing of surpluses, micro-irrigation and livestock-raising. It is currently playing a central role in the organization and management of food and nutritional policy.

With regard to disaster prevention and relief, Guatemala has a National Coordination Office for Disaster Reduction (CONRED) which is responsible for: “coordinating, planning, developing and executing all actions designed to reduce the effects of natural, socio-natural or man-made disasters and obviating the generation of new risks, through preventive action” (www.conred.org).

The main fields of activity of the food aid programmes are:

a) School meals

Guatemala has had programmes aimed at the school population since the 1980s. These programmes have adopted various different action strategies because of operational problems and changes of government.

At the beginning, a nutritive biscuit or fortified corn meal mash was distributed in all the public schools in the country.

Between 1996 and 1999 there was a school breakfast service providing soya protein foods, spaghetti and vegetables, which achieved 100% coverage in the rural sector, while nutritive biscuits or incaparina continued to be served in the urban sector.

In 1999 the “Contented Heart” school lunch programme was begun, with a pilot project for the preparation of lunches in 10 schools of 7 municipalities, with the participation of the community, the private sector and the State. The latter provided training for the community in food preparation, the WFP provided milk and cooking oil, plus support in its distribution, while the community provided milk and vegetables.

Due to logistical problems and the rejection of the menus by part of the beneficiary population, as from 2001 it was decided to use a model based on contracting the service out to private firms. This gave rise to some problems of targeting which caused a serious loss of foodstuffs through rejection or decomposition, so it was decided to provide universal coverage of the school breakfast programme involving the provision of a fortified biscuit (28 grams) and a glass of incaparina (20 grams), representing 15% of the daily calorie and protein requirements and 100% of the micro-nutrient requirements (vitamin A, iron, thiamine, riboflavin, folic acid and vitamin B).

In 2003, with the establishment of the Under-Ministry for Food and Nutritional Security, the resources for this programme were transferred to MAGA, which decided to distribute money to the school boards (only in establishments where such boards had been set up), which were also given training in handling money and in administration. The pilot project provided for three quetzales per child per day (38 US cents), but now only 2 quetzales per day (25 US cents) are being given. These resources would only cover one fortified drink per day or a lunch every two or three days.

At present, 57,000 students are being served, out of a total of 1,600,000 students enrolled in the school system.

The WFP contribution is used to provide corn meal mash, supplemented with that provided by MAGA, with only 20 municipalities out of a total of 361 requiring this, according to the variation in severe chronic malnutrition between the last height survey (2001) and the 1986 IDA survey.

b) Mother and child nutrition

There are basically two programmes aimed at preschool children, pregnant and nursing women, and working women:

The Community Shelters programme of the Social Works Secretariat sponsored by the First Lady of the Republic. These shelters began in the early 1990s as care centres for preschool children to improve their nutritional state and cognitive and socialization capabilities, as well as allowing their mothers to go out to work.

The food aid is provided in the form of food in exchange for the acceptance of training in child care.

The Integral Care Plan (PAIN) of the Ministry of Education (MINEDUC) dates from the mid-1980s and aims to promote the care and initial upbringing (0-6 years) of children in rural and marginal urban areas, by means of child care centres.

Children under 3 receive weekly attention, with stimulation, controls and health care. The 3-5 age group receive attention for three hours a day, with stimulation of their development. In both cases there is participation by the community and by the children's mothers, who are given training in health, nutrition and education.

Food aid is given to the care centres in exchange for the training of the mothers and is prepared and served to the children there. This plan covers 41 municipalities in 13 departments.

c) Nutritional recovery

The Emergency Attention Programme for Families Affected by Drought and Acute Malnutrition, which was initiated in 2001 and is operated by MSPAS, is aimed at securing the recovery of cases of malnutrition. It provides for the identification of families in geographical areas affected by drought who are in a situation of food insecurity and have children suffering from acute malnutrition. Children with severe malnutrition are referred to National Recovery Centres (CRN) for treatment, while those who are suffering from moderate or slight malnutrition are treated in their own communities.

d) WFP contributions

As already noted, the WFP plays a direct part in these programmes through the food it supplies and its support in the fields of operational tasks of food distribution and monitoring of the work done. According to the Country Programme, food aid for the 2001-2004 period is estimated at 14,000 tons, for the provision of aid to 57,000 schoolchildren, 28,550 preschool children and 17,700 mothers.

The biggest contribution in terms of the volume of food and resources provided and the number of beneficiaries served, however, is that made by the social funds, which carry out social development and damage relief programmes for vulnerable population groups affected by natural disasters, conflicts and migrations. The WFP distributes food in conjunction with the National Fund for Peace (FONAPAZ) and the Social Investment Fund of Guatemala (FIS).

- a) With FONAPAZ, support is provided for activities aimed at improving the food security situation of the poor population which is being resettled under the 1996 Peace Agreements. These activities seek to improve living conditions by aiding in the procurement and preservation of family assets, for which purpose the WFP has planned to distribute 15,000 tons of food to women (in the last two years), so that, in return for work and training, it will be possible to recuperate basic social infrastructure such as houses, latrines, water and drainage systems and school health centres, along with some agricultural and forestry activities.

In the six years it has been operating, the Programme has aided 70,000 families (330,000 persons) in 88 of the 102 municipalities given priority by the government; the other 14 are served by USAID through cooperating institutions.

As regards the management of the Programme, FONAPAZ is the executing agency, with the support of community associations of women and peasants, NGOs, FAO and the International Fund for Agricultural Development (IFAD).

- b) The activities carried out with the FIS seek to improve the food insecurity situation of households exposed to natural disasters and adverse environmental factors. It is aimed to

stop environmentally unsustainable harvesting practices, increase productivity in the supply of food, and ensure access to markets. For this purpose, since 1999 the WFP has provided 9,000 tons of food to 27,000 families (148,000 persons), distributed through the mothers, on a food-for-work basis.

As in the previous case, the management model has the FIS as the executing agency, with peasants' associations as strategic partners, together with the NGOs, FAO and IFAD.

Another area of work in which the WFP aids in programme management is the provision of technical support for the targeting of resources on vulnerable areas, through Vulnerability Analysis and Mapping (VAM): an instrument which in the case of Guatemala was developed jointly with MAGA.

The food contributions of the WFP come mainly from Germany, Belgium, Canada, Denmark, the United States, Finland, France, Ireland, Norway, the United Kingdom and Switzerland.

e) Other actors

There are a number of international and foreign institutions which cooperate in research and assistance or operate food aid projects directly. They include the Red Cross, FAO, INCAP/PAHO, IFAD and UNICEF, as well as CARE, the European Community, CRS, SHARE and USAID.

USAID's cooperation has varied from 200,000 tons per year in the 1980s to 60,000 in 1996. In 1999 there was a temporary increase in this aid in order to deal with the problems caused by Hurricane Mitch. In the same year a United States food surplus distribution mechanism was implemented which led to an increase in contributions from the equivalent of US\$ 11.8 million in 1997 to US\$ 18 million in 2001.

USAID's contributions include the provision of food and the monetization of part of this food aid in order to generate foreign exchange and provide support for development and emergency aid programmes. This proportion amounted to 47% in the late 1990s.

In recent years, the work strategy has concentrated on the areas where there were armed conflicts in the past and has been focused on groups of displaced or returning people and on the indigenous labour force which migrates on a seasonal basis.

In the distribution of resources and the management of this task, this work is coordinated with the WFP and four cooperating institutions: CARE, CRS, Save the Children, and SHARE, which receive technical and financial assistance. CARE carries out activities in 13 municipalities in Alta Verapaz, Quiché, Huehuetenango and Sololá. CRS concentrates its activities on the departments of Huehuetenango, Quiché, San Marcos, Alta Verapaz and Chiquimula (one municipality in each of these). Save the Children operates in 9 municipalities in Quiché. Finally, SHARE has projects in 34 municipalities in Chimaltenango, Alta Verapaz, Baja Verapaz, Huehuetenango and San Marcos.

3. Honduras

For matters related with emergencies due to natural disasters, Honduras has a Multisectoral Drought Committee (COMUS) directed by the Ministry of Agriculture with the participation of various government institutions, international organizations and some NGOs. COMUS provides support for actions relating to the recurrent drought, food insecurity and nutrition.

The most important food programmes in this country are “Healthy Schools” and the Family Allowance programme (PRAF).

a) The “Healthy Schools” programme (PES)

This programme, which was initiated in 1998, carries out activities among the preschool and school population in rural and marginal urban areas, with the aim of improving living conditions.

It provides for a school meal service and a range of medical and dental services, vaccination and community and school vegetable gardens.

It covers 14 departments and serves 2,704 schools in 145 municipalities, where a total of 327,000 children receive a daily meal.

The main elements in the food and nutrition component are:

- **School lunch:** This provides a daily food supplement based on soya, rice, beans, maize and cooking oil, plus vegetables produced in the school gardens.

Each ration costs 9 US cents and is financed by the Government of Honduras and the WFP.

Its organizational and management model reflects a high degree of interdependence of the actors. At the central level, the Ministry of Education determines, on a targeted basis, the amount of food to be supplied to each community, using demand data taken from the undernutrition survey carried out by PRAF. The WFP provides logistical support by distributing the food to mayors, district directors (representatives of the Ministry of Education) and PES promoters, who, in turn, distribute the food among teachers and mothers with families, who prepare the lunches and give them to the schoolchildren.

For ensuring proper preparation of the lunches by the children’s mothers, ongoing training is provided by the PES promoters, who also draw up a calendar of menus.

- **School vegetable gardens:** This project involves activities in the areas of food education, production and consumption in all the schools covered by the Programme, for which purpose seeds and tools are supplied and the work is organized through coordination between the local Healthy Schools promoter, teachers, parents and schoolchildren.

The children benefit from the Programme by learning sowing and harvesting techniques for easily grown vegetables and graminaceous crops which they cultivate in the school grounds or small allotments. Their parents and other members of the community also benefit by learning new production techniques and eating habits.

- **Nutritional supplements:** The Programme provides supplements containing micro-nutrients (vitamin A and ferrous sulphate) to 100,000 students twice a year, through medical personnel who visit the schools. It also supports the monitoring of the fortification of foodstuffs with vitamin A, iodine and iron, in coordination with the Food Control Department of the Ministry of Health.

In addition to the foregoing products, the Programme also distributes anti-parasite drugs for oral and external use twice a year, for the purpose of protection and rehabilitation, and holds micro-nutrient fairs to promote the consumption of foodstuffs rich in these elements. The budget of the Programme is US\$ 5.3 million, of which 63% comes from the national budget, 7.9% from the BCIE, 14.9% from the WFP, 13.4% from the beneficiary communities, 3% from the Government of Saudi Arabia, and 1% from UNDP. The total cost amounts to US\$ 16.1 per child served.

b) Family Allowance Programme (PRAF)

This was established in 1990 with the aim of “promoting a sustainable human development process designed to reduce poverty by giving support to poor families so that they can satisfy their basic health and education needs, providing benefits for the elderly, and developing the social and productive capabilities of women” (www.praf.gob.hn).

The mother and child nutrition and health component of PRAF makes monetary transfers of 50 lempiras (US\$ 3) per month to families with unsatisfied basic needs and an annual income of less than 600 lempiras (US\$ 36).

Among the benefits provided are:

- A nutrition allowance: This was initiated in 1998, is provided for all 12 months of the year, and is intended for children up to 5 who are undernourished or in danger of undernutrition. It was established as a way of reducing the high indices of undernutrition existing in the country.
- An education allowance: This is provided for 10 months of the year to children enrolled in first to fourth grade in the public schools of the country. It is given to a maximum of three children per family and is designed to help reduce the rates of repetition, increase school enrolment, avoid dropping-out and absenteeism among students, and increasing the capacity to acquire goods that favour food security and the reduction of poverty.

This allowance is distributed through the school directors of each school district, who are provided with a list of beneficiaries so that the teachers can distribute the money to them.

- Mother and child allowance: this is given to all children under 5, disabled children up to the age of 12, and pregnant women from extremely poor families with three or more unsatisfied basic needs (such as food, health and basic sanitation). There is a limit of three beneficiary children per family.

This allowance is distributed through the health centres and is designed to improve the diet and increase the coverage of basic health services of pregnant women and children under 5 who are undernourished or in danger of undernutrition.

Phase II of PRAF includes a Health Service Quality Incentive (ICS) for health service providers (health and nutrition supply), and consists of providing health centres with a package of medicines and basic equipment and making available funds for the training of health personnel, the payment of incentives for good performance, and coverage of emergency obstetric costs, so as to improve the quality of mother and child health attention and nutrition, to which end mothers will also be educated in dietary and hygiene practices.

According to its Manual of Operations and Administrative Regulations, the ICS covers the transfer of resources to the health centres of 30 municipalities in 6 departments (Lempira, Copán, Ocotepeque, Santa Bárbara, La Paz and Intibucá) in order to promote good attention and improve the health of the population, the original goal being to cover 69 improved health centres.

The initial budget of the ICS, calculated from the basic situation of each health centre (size of population served, number of health staff and requirements) comes to between 90,000 and 220,000 lempiras per year.

In order to finance its activities, the PRAF receives resources from the national budget, IDB, UNDP, WFP, BCIE, the European Union, UNESCO, UNICEF, the Inter-American Commission of Women (ICW), and a number of friendly countries: Spain, Holland, Sweden and Taiwan.

c) WFP programmes

As may be seen from the previous sections, the WFP is involved both in the design and financing and the management of the national programmes indicated.

For the five-year period from 2002 to 2006, the Country Programme provides for:

- School meals: as an integral part of the PES, this component aims to distribute food rations to 125,000 schoolchildren for 160 days per year (a target which it is planned to increase by 50%) and to supply food rations to approximately 10,000 women for 80 days per year, as an incentive for them to attend literacy classes. This calls for the distribution of 6,120 tons of cereals, pulses, cooking oil and a mixture of maize, soya and sugar during the five-year period in question.
- Assistance for vulnerable women and children: this is aimed at pregnant and nursing women and children under 2, in order to improve their state of health and nutrition, increase their attendance at health centres, and increase their knowledge of basic health, nutrition and sanitation. It will cover 33 municipalities in four departments, where 8,070 tons of food will be distributed among 18,000 beneficiaries.
- Support for poor households, so that they can find more sustainable means of subsistence, forestall disasters and mitigate their effects if they occur. This project is coordinated by the State Forestry Administration and the Honduran Forestry Development Corporation (AFE-COHDEFOR) and operates in rural communities in forest areas, where it is aimed to benefit 50,000 persons from families exposed to food insecurity, through the food-for-work system, by providing 14,800 tons of food during the five months of the year when food is scarcest.

In addition, the possible expansion of this activity by 20% is envisaged, if extra resources can be obtained.

The work of the WFP in this country is based on cooperation with over 180 national institutions (central- level bodies, municipalities, NGOs, community groups, etc.), three multilateral and bilateral donors (BCIE, USAID, CIDA) and 30 international organizations and NGOs.

4. Nicaragua

In the field of environmental risks, there is a National System for Disaster Prevention, Mitigation and Relief (SINAPRED) which, with financing from the World Bank, has built up an operational structure at the national, departmental and municipal levels, with some efforts at the community level aimed at: “reducing situations of risk through the generation of a culture of prevention among citizens, programmes aimed at the mitigation of the effects of disasters, and strengthening of sectoral and territorial capabilities”. It is currently working on the preparation of risk maps for 80 municipalities.

With regard to food aid programmes, special mention may be made of:

a) Integral School Nutrition Programme

This programme is carried out by the Ministry of Education, Culture and Sport (PINE-MECD). Its aim is to help raise levels of school performance and reduce dropping-out, through the distribution of food for preparation in primary schools and in formal and community preschool establishments (for children over 2).

In the past, three types of food aid have been given under the programme:

- Nutritive biscuits: the daily ration is three 28-gram biscuits for 240 days per year, in urban and peripheral urban areas.

For the 2003-2004 school year, the programme aims to distribute 30,000 daily rations in 360 educational centres located in 31 municipalities of 9 departments which suffer from severe, high or moderate poverty (<http://www.mecd.gob.ni/galleta.asp>).

Financing for this part of the programme is provided by the Fundación Vida of the “Banco UNO” bank.

- Glass of milk: this involves the distribution of rations of milk to students in urban and peripheral urban areas in the areas of the country where most milk is produced.

This activity corresponds to an initiative, supported financially by the Government of Japan, for the purchase and distribution of milk in the areas of greatest production. The authorities thus act as a purchasing agent to help cover seasonal increases in milk supply while aiding the food consumption of vulnerable children.

- School lunches: this activity involves the provision of daily lunches for 160 days of the school year in areas where the previously mentioned lines of assistance do not exist. The food is prepared in the educational centres with food distributed by the WFP (rice, peas, canned fish, maize, fortified cereals and cooking oil) and the support of the communities themselves.

The programme covers 95,000 children each year on a stable basis, and its coverage has amounted to as many as 325,000 children in recent years, thanks to extraordinary contributions by the United States, reaching 4,136 formal and community schools and preschool establishments.

It operates in 60 municipalities classified as having very high or high vulnerability to food insecurity in 10 departments and two Autonomous Regions: Nueva Segovia, Madriz, Estelí, León, Chinandega, Boaco, Chontales, Matagalpa, Jinotega, Managua and the Northern and Southern Atlantic Coast Autonomous Regions (RAAN and RAAS).

In the 2003 school year, it was planned to distribute approximately 8,443 metric tons of food (185,746 quintals), costing the equivalent of US\$ 4.5 million, with donations mainly coming from Germany, Canada, Denmark, Spain, the United States, Finland, Holland, Ireland, Japan, Luxembourg, Norway, Sweden, Switzerland and funds from the WFP itself.

b) Attention for families and children at high nutritional and educational risk

The Ministry of the Family (MIFAMILIA) has three complementary food aid programmes (<http://www.mifamilia.gob.ni/atencionnutricional.htm>).

- Community Children’s Centres (CICOS). These serve 40,000 preschool children in 12 departments mostly located in the Northern Atlantic Coast Autonomous Region (RAAN), selected for their degree of vulnerability (WFP/Norwegian Agency for Development Cooperation (NORAD)).

The project provides the foodstuffs needed to prepare a lunch and nutritive drink in community preschool educational centres, in order to improve educational quality and attendance and reduce the dropout rate.

The food is handled by the local offices of MIFAMILIA. Control, follow-up and evaluation in the field are carried out by local technicians in coordination with MIFAMILIA.

The programme mainly serves rural areas of municipalities selected for their high incidence of severe malnutrition (according to data of the Ministry of Health – MINSA) and the poverty map of the Emergency Social Investment Fund (FISE).

The food mostly comes from foreign donations, which the WFP plays a central coordinating role. Some foods, such as sugar, however, are acquired locally with project funds.

- Child Development Centres (CDI). These provide integral attention for 3,600 urban children between the ages of 0 and 6 years who have working mothers and fathers or need special protection through the implementation of social protection actions based on educational and nutritional vulnerability.

The CDIs are run by the State or by private associations or foundations, with an organizational structure that includes the director of the centre in question, a staff of attendants, administrative personnel, and the organized participation of the parents themselves. There is also an extensive support network which includes MIFAMILIA, MECD, MINSA, WFP, UNICEF, NGOs and actors from civil society.

Financing is provided through government grants and donations from European groups.

- Social Protection Network (RPS): this seeks to build up human capital by supplementing the income of extremely poor families for up to 3 years in order to increase spending on food; to increase the care given to children between 0 and 9 years of age, women of fertile age and adolescents in general; to reduce the dropout rate between the first and fourth grades, and to help develop production.

The health and food security component provides for two types of allowances:

- A food allowance (BA) which represents an incentive or support for demand equivalent to US\$ 224 per family annually, subject to the fulfillment of a care plan.
- A supply allowance (BO) which represents the payments made to suppliers for the cost of the supply offered, estimated at US\$ 54 per family annually, excluding the cost of immunizations, which is covered by MINSA. This allowance is aimed at health service providers, in return for the fulfillment of targets in respect of the extension of coverage.

These allowances are financed by the State from an IDB loan.

c) The participation of the WFP

The WFP plays a central role in the coordination and distribution of the food donations used in the above-mentioned government programmes, which are in turn central elements in the functioning of the WFP's 2002-2006 Country Programme.

In addition to these programmes, the WFP has a component called Integrated Assistance for Vulnerable Women and Children which is designed to improve the nutritional state of children under 2 and pregnant and nursing women by providing a food supplement enriched with micro-nutrients, plus training in health, nutrition and sanitation.

This activity, which was initiated as a result of the experience obtained with PRRO 6089, designed to relieve the effects of Hurricane Mitch, aims to serve an average of 15,000 women and some 27,000 children each year. This calls for the distribution of 1,970 tons of food.

For this purpose, an operating model was designed which is centered on a national technical committee in which MIFAMILIA, MINSA, UNICEF and the WFP take part. At present, however, the national counterpart agency is the Ministry of Agriculture and Forestry (MAG-FOR).

The WFP also has a component entitled Support for Rural Families in Areas Affected by Droughts and Floods which is designed to support families who live in areas vulnerable to natural disasters and to reduce that vulnerability through soil and water conservation practices on their holdings.

In coordination with MAG-FOR, it is aimed to aid 80,000 persons (16,000 families) each year through food-for-work activities which will last approximately 100 days per year. This aid involves a total of 21,400 tons of food during the period covered by the Country Programme.

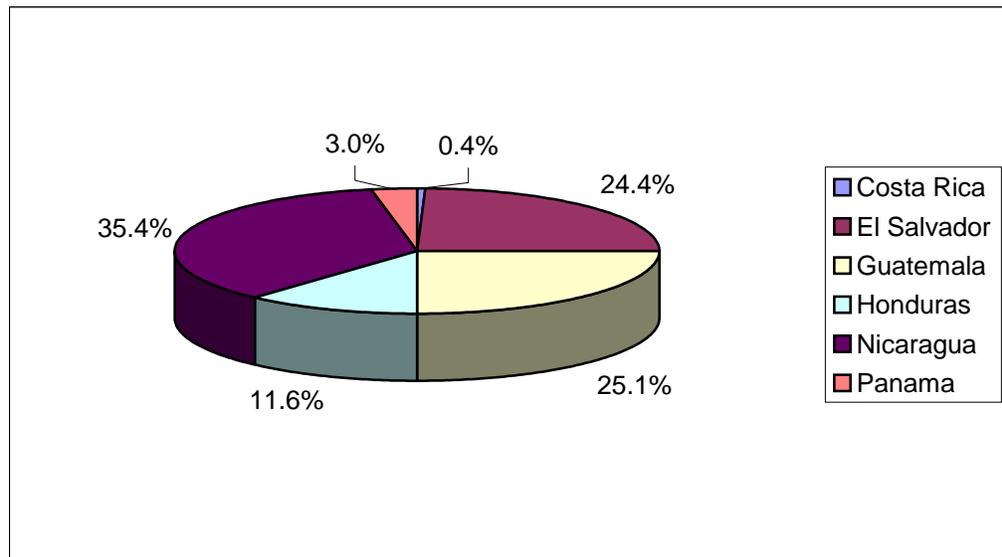
Finally, it should be noted that in all the components and programmes referred to above, the WFP aids in the selection of vulnerable areas and population groups through its Food Security Vulnerability and Mapping Unit (VAM).

5. Horizontal and international cooperation

Central America has various cooperation mechanisms for achieving its objectives of checking and reducing food and nutritional insecurity. This cooperation is expressed both through its integration into national policies and through independent actions.

According to FAO, between 1990 and 2001 there were big fluctuations in the food aid supplied to Central America, ranging from 33 million tons in 1995 to 112 million in 1991. Of the 885 million tons distributed in that period, Nicaragua was the country which received most aid, followed by Guatemala and El Salvador.

Figure 28
CENTRAL AMERICA (6 COUNTRIES): DISTRIBUTION OF FOOD AID IN CENTRAL AMERICA, 1990-2001
(Percentage)



Source: FAO, FAOSTAT Nutrition.

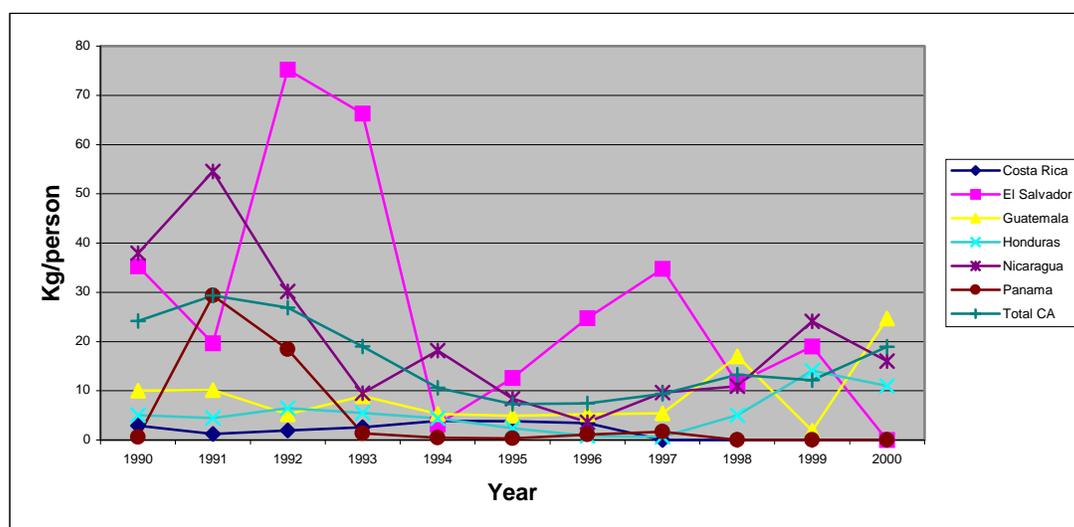
When this aid to those countries is compared with the regional total, this also shows variations from one year to another, with an average of 39%, a minimum of 22% (in 1995) and a maximum of 74% (in 2000).

If the volumes of aid are divided by the population considered to be undernourished (according to FAO figures), it may be seen that the largest amount of aid per capita was at the beginning of the decade (between 24 and 29 kg), going down to less than a third of that level towards the middle of the period and then partly recovering to almost 19 kg per capita. On average, El Salvador and Nicaragua were the countries which received most aid per capita, considerably exceeding the others (26 kg and 19 kg per capita, respectively, compared with an average of less than 6 kg per capita for the others).

There are two answers which might be expected in respect of these differences between countries. Firstly, the incidence of undernutrition is not equally severe in all cases. It might be expected that the lower the food energy supply (FES), the more cases there would be of persons with food access below 1,200 kcal/day, so that a larger volume of aid would be needed, yet Guatemala is not the country that receives most food aid per capita.

Secondly, natural disasters affect each area differently, so that it might be expected that the food made available for such aid would be targeted on a geographical basis.

Figure 29
CENTRAL AMERICA (5 COUNTRIES) AND PANAMA: VOLUME OF FOOD COMPARED WITH TOTAL UNDERNOURISHED POPULATION
(Kilogrammes per person per year)



Source: FAO Food Balance Sheets.

Obtaining financial resources and food, together with detecting problems, establishing the priorities of the different beneficiaries and distributing aid, call for the coordination of various fields of management involving many organizations. Among the regional bodies that cooperate with the provision of food aid in Central America, special mention may be made of the following:

- The Central American and Panamanian Institute for Nutrition (INCAP/PAHO). This institute seeks to make food and nutritional security a standard condition of life in Central America, so that there will be integral public policies with a multisectoral approach in the region which guarantee human beings the availability, access to and consumption of food, together with proper biological utilization of nutrients, while also strengthening local development processes that favour the social and economic growth of the individual, the family and the community. Its areas of work include research, information and communication, technical assistance, training and development of human resources, and mobilization of resources (www.incap.org.gt).

- The “Healthy Schools” initiative: an effort of global scope that seeks to promote health and health education at all educational levels, through technical cooperation with and among countries, consensus-building between the health and education sectors, and the formation of alliances with other sectors in order to achieve healthy lifestyles. Its regional-level strategy provides for the analysis and updating of joint policies between the sectors. One of its three components is the design and provision of health and food services in schools, in which connection the PAHO provides support for the school dining rooms of various countries of the region (www.paho.org).
- The Inter-American Institute for Cooperation on Agriculture (IICA) is an agency of the OAS whose member States agreed to entrust the IICA with the development and strengthening of mechanisms for cooperation and exchanges with other organs, organizations and bodies of the inter-American system to propose, coordinate and execute policies and programmes to improve agriculture and rural life, within the framework of the inter-American system and the Summits of the Americas process (www.iica.int).
- The FAO Special Programme for Food Security, which provides technical support to the Central American countries for the reduction of food insecurity by seeking to reduce the year-to-year variability of agricultural production, improving food access and creating suitable conditions for encouraging public and private investment, all by promoting increased agricultural productivity and raising the income of small farmers. The countries taking part in this programme are Guatemala, Honduras and Nicaragua, which are implementing the first stage of the programme activities, aimed at participative plans designed to solve bottlenecks in specific areas. In a second phase, it is planned to take action to disseminate some successful examples of similar activities (www.rlc.fao.org).
- The Technical Cooperation Network on Food and Nutrition Monitoring Systems (SISVAN) is another important effort being carried out by FAO at the regional level. The SISVAN network, which was initiated in 1986, brings together public, private and independent institutions from all over Latin America with the aim of promoting vigilance and increasing technological capacity by the horizontal interchange of experience and knowledge among countries. It also supports the follow-up of the Summits and, since 1997, has been responsible for running the Food Security and Vulnerability Information and Mapping System (SICIAV), which includes the preparation of nutrition profiles for 28 countries of the region (in Central America, only that for Honduras remains to be published) with brief descriptions, comparisons between localities, and analysis of causes (www.rlc.fao.org).
- The International Fund for Agricultural Development (IFAD) has support programmes for rural micro-enterprises which cover the experiences of all the countries of the region (www.ifad.org).
- The Central American Integration System (SICA) carries out coordination activities among the countries of the subregion and provides support for mitigating the effects of natural disasters and coordinating policies in the productive, economic and social fields (www.sgsica.org).
- The Coordination Centre for the Prevention of Natural Disasters in Central America (CEPRENAC) provides the countries with support through technical assistance and horizontal cooperation activities for following up climatological, seismic and volcanological phenomena, early detection of natural disasters, and relief activities. Among its most important projects are the Regional Disaster Reduction Plan, through which the governments of the region, by way of their specialized institutions, set out their

policies, priorities and actions for the prevention and mitigation of disasters, and the Strengthening of Local Structures for Disaster Mitigation (FEMID) project (www.cepredenac.org).

- The Regional Office of the World Food Programme (WFP) carries out project design, organization and operation activities in each country and in Central America as a whole. The most recent Protracted Relief and Recovery Operations (PRRO) are activities designed to offer joint solutions for food problems in El Salvador, Guatemala, Honduras and Nicaragua. PRRO 6089 was established with the aim of mitigating the consequences of Hurricane Mitch (1998) and was centered on the development of reconstruction projects on the “food for work” system which benefited 1,100,000 persons. PRRO 10212, which was begun in 2003 with a budget of US\$ 56,600,000 and a coverage of 690,000 persons per year, coordinates actions in the countries of the subregion, with special attention to problems deriving from natural disasters (earthquakes, hurricanes, storms, floods, droughts) which have affected 9 million persons in recent years (www.wfp.org).

Bibliography

- Arroyo, Jorge. y M. Nebelung, (eds.) (2002), “La micro y pequeña empresa en América Central; realidad, mitos y retos”, GTZ/PROMOCAP y PROMICRO/OIT San José, Costa Rica.
- Asociación Demográfica Salvadoreña (ADS) (2000), Encuesta Nacional de Salud Familiar FESAL-98, San Salvador, April.
- Barrance, A.J. (1997), “Recursos Genéticos Forestales en Centroamérica: el Desafío de la Conservación. Red Forestal para el Desarrollo Rural”, Documento 21f, verano 1997 ODI, Portland House, Stag Place, Londres SW1E 5DP, Reino Unido.
(<http://www.odifpeg.org.uk/espanol/publications/rdfn/21/rdfn-21f-iv-espanol.pdf>).
- Berdegú, J., F. Balsevich, L. Flores, T. Reardon, (2000), The Rise of Supermarkets in Central America: Implications for Private Standards for Quality and Safety of Fresh Fruits and Vegetables. Final report for the USAID-RAISE/SPS
- Bolaños, Enrique (2003), “Bases para una Nicaragua Próspera”, Presidency of the Nicaragua Republic, March.
- Brenes, C. (2002), “El fenómeno ENOS: agricultura y seguridad alimentaria y nutricional en Centroamérica”. Final report presented to the Seminar Regional, San Salvador, May.
- CAC (Consejo Agropecuario Centroamericano) (2002), “Seguridad Alimentaria en Centroamérica: del Manejo de Crisis en el Corto Plazo, al Manejo de Riesgos y Reducción de la Vulnerabilidad en el Largo Plazo”. Document presented at the World Food Summit. Roma, 10-13 June.
- Compton, P., E. De Loma-Ossorio y C. Zelaya (2003), La Seguridad Alimentaria en Centroamérica. Presented in the XLVII Annual Meeting at the PCCMCA, La Ceiba, Honduras, April 28 - May 3.
- CONASAN (2001), Plan de Acción de la Política Nacional de Seguridad Alimentaria y Nutricional 2001-2006, Managua, October.

- _____ (2000), *Política Nacional de Seguridad Alimentaria y Nutricional 2001-2006*, Managua, 29 September.
- Davidson, G. y otros (2000a), "Socio-Economic Differences in Health, Nutrition and Population in Guatemala". The World Bank Group, Washington, May.
- _____ (2000b), "Socio-Economic Differences in Health, Nutrition and Population in Nicaragua". The World Bank Group, Washington, May.
- Despacho de la Designada Presidencial de Honduras (2003a), *Aproximación a un marco de referencia para la construcción de políticas públicas en seguridad alimentaria nutricional*, Tegucigalpa, January.
- _____ (2003b), *Política Social, Plan Nacional de Nutrición: hacia políticas de Estado con visión de largo plazo*, Tegucigalpa, July.
- Dirven, Martine (2001), *Apertura económica y (des)encadenamientos productivos. Reflexiones sobre el complejo lácteo en América Latina. Libro de la CEPAL N°61*, Santiago de Chile, Economic Commission for Latin America and the Caribbean (ECLAC). United Nations publication, Sales N°: S.01.II.G.23.
- ECLAC (Economic Commission for Latin America and the Caribbean) (2003a), *Social Panorama of Latin America 2002-2003 (LC/G.2209-P/E)*, Santiago, Chile (in press).
- _____ (2003b), *Istmo Centroamericano: Evolución del sector agropecuario, 2001-2002 (LC/MEX/L.550)*, México, February.
- _____ (2003c), *Latin America and the Caribbean in the world economy 2001-2002 (LC/G.2189-P/E)*, Santiago, Chile, United Nations publication, Sales N°: S.03.II.G.10
- _____ (2002a), *Indicadores Sociales Básicos de la Subregión Norte de América Latina y El Caribe (LC/MEX/L.537)*, México, August.
- _____ (2002b), *Globalization and Development (LC/G.2157)*, Santiago, Chile, May.
- _____ (2002c), *Statistical yearbook for Latin America and the Caribbean 2002 (LC/G.2190-P/B)*, Santiago, Chile. United Nations publication, Sales N°: E/S.03.II.G.1.
- ECLAC/ BADECEL (Economic Commission for Latin America and the Caribbean/Foreign Trade Bank for Latin America and the Caribbean).
- European Union (EU) (2003), "Propuesta de una estrategia de Seguridad Alimentaria y Nutricional Regional y de su Plan de acción". Document presented at the Seminar Regional, Managua, 6-8 May.
- FAO (Food and Agriculture Organization of the United Nations) (2002a), "The State of Food Insecurity in the World 2002". (<http://www.fao.org/docrep/005/y7352e/y7352e00.htm>).
- _____ (2002b), "World Agriculture: Towards 2015/2030. An FAO Perspective" (<http://www.fao.org/docrep/005/y4252e/y4252e00.htm>)
- FAOSTAT-Nutrition, Food Balance Sheets, (<http://apps.fao.org/lim500/wrap.pl?FoodBalanceSheet&Domain=FoodBalanceSheet&Language=english>).
- FAO/IPGRI (Food and Agriculture Organization of the United Nations /International Plant Genetic Resources Institute) 2001, *El papel de la mujer en la conservación de los recursos genéticos del maíz, Guatemala*. Investigation published in Roma, Italy.
- FAO/RLAC (Food and Agriculture Organization of the United Nations / Regional Office) (1990), "Informe final del Taller Internacional sobre Venta Callejera de Alimentos", organized by FAO/RLAC and the Institute of Nutrition of Central America and Panama (INCAP), Guatemala, NUT-45.
- _____ (1988), *Potencialidades del desarrollo agrícola y rural de América Latina y el Caribe*, LARC88/3, Rome.
- _____ (1983a), "Informe del Director General sobre la seguridad alimentaria mundial: reconsideración de los conceptos y métodos", CFS: 83/4, December.
- _____ (1983b), "Experiencia latinoamericana en cadenas voluntarias y cadenas cooperativas de comerciantes minoristas de alimentos", Regional Office for Latin America and the Caribbean, RLAC/MERC-5, Santiago, Chile.
- Fong, N. (2003), *Informe de la consultoría sobre la temática del hambre en la región de América Latina y el Caribe*, Working Paper for the World Food Programme/Food and Agriculture Organization of the United Nations (WFP/FAO), Panama, May – June.
- Groot, J.P. y R. Ruben (1997), *Sustainable Agriculture in Central America*. Macmillan Press, London.
- INCAP (Institute of Nutrition of Central America and Panama) (2003a), *Propuesta de indicadores para la vigilancia de la seguridad alimentaria y nutricional (SAN)*, Guatemala, November.
- _____ (2003b), *Ordenamiento y optimización de la cooperación técnica y financiera internacional frente al resurgimiento de la inseguridad alimentaria y nutricional aguda en Centroamérica*, Guatemala, 5-6 June.

- _____ (2003c), “Grado de avance de la iniciativa de Seguridad Alimentaria y Nutricional en los países miembros del INCAP”, Guatemala, September.
- _____ (2002), La iniciativa de Seguridad Alimentaria Nutricional en Centro América. Guatemala, March (www.incap.org.gt).
- INEC-MINSA (Instituto Nacional de Estadística y Censos/Ministerio de Salud) (2001), Encuesta Nicaragüense de Demografía y Salud (Endesa), Managua
- James, W.P.T. y E.C. Schofield (1990), *Human energy requirements: a manual for planners and nutritionists*. Publicado por Oxford University Press FAO, New York.
- Jimenes, S. (2002), Evaluación nutricional rápida de Guatemala, Nicaragua, Honduras y El Salvador, World Food Programme (WFP), La Habana, December.
- Kaimowitz, D. (1996), *Livestock and deforestation Central America in the 1980s and 1990s: A policy perspective*. Center for International forestry Research (CIFOR), Indonesia. (http://cifor.cgiar.org/publications/pdf_files/spubs/sp-lstock-n.pdf).
- Koulychizky, S. (1985), "Analyse et stratégie de filière, une approche nouvelle en agroalimentaire" en *L'analyse de filière*. Symposium convocado by l'École Supérieure de Nantes and l'Action pour le Développement et le Financement des micro-entreprises (ADFI), Paris.
- MAGA, PMA, GSD (Ministry of Agriculture, Cattle and Food/World Food Programme/Unidad de de Planificación Geográfica y Gestión de Riesgo) 2002, “Cartografía y análisis de la vulnerabilidad a la inseguridad alimentaria en Guatemala”, Guatemala, December.
- Meyer Heino von y Philippe Muheim (1997), “Employment is a Territorial Issue” en *The OECD OBSERVER*, N° 203, January.
- Ministry of Education, El Salvador (2002), “Manual de normas técnicas y administrativas del Programa de Alimentación Escolar”, San Salvador, January.
- _____ (2000), “Sistematización Escuela Saludable”, San Salvador, May.
- Ministry of Health, Nicaragua (2002), Sistema integrado de vigilancia de las intervenciones de nutrición SIVIN (First draft). Managua, January.
- Ministry of Public Health and Social Assistance, El Salvador (2003), Política de seguridad alimentaria y nutricional. San Salvador, July.
- Naiken, L. (2002), FAO methodology for estimating the prevalence of undernourishment (Kenote Paper), Rome, Italy.
- Onis, M., E.Frongillo y M. Blössner (2001), “¿Está disminuyendo la malnutrición? Análisis de la evolución del nivel de malnutrición infantil desde 1980”, Bulletin of the World Health Organization (WHO), Collection of Articles N°4.
- Ortega, L. (1998), La seguridad alimentaria en Honduras: informe de consultoría, Tegucigalpa, February.
- Paes de Barros Carvalho Ricardo, Mirela Franco Samuel (2003), “*On the Relationship between mal nutrition and extreme poverty*”, World Food Programme (FAO), Panama, September.
- Reardon, Thomas y Julio Berdegué (comp.) (2002), “Supermarket and agrifood systems: Latin American Challenges”, Development Policy Review, vol. 20, N°4, September.
- Rello, F. y D. Sodi (1989), Abasto y distribución de alimentos en las grandes metrópolis, Editorial Nueva Imagen, Mexico.
- RIMISP (International Network for Farming Systems Research Methodology) (n.d) (<http://www.rimisp.org/seccion>).
- Schejtman, A. (1994). Economía Política de los Sistemas Alimentarios en América Latina”, Food and Agriculture Organization of the United Nations (FAO), Santiago, Chile.
- _____ (1980), “Economía campesina: lógica interna, articulación y persistencia” en *Revista de la CEPAL* N° 11, Santiago, Chile.
- Schejtman A. y J. Berdegué (2003) “Desarrollo Territorial Rural” International Network for Farming Systems Research Methodology (RIMISP), Santiago, Chile (<http://www.rimisp.org/getdoc.php?docid=870>).
- Sen, A.K. (1982), Poverty and famine: An essay on entitlements and deprivation, Clarendon Press, Oxford.
- SISSAN (Sistema de Información para el Seguimiento de la Seguridad Alimentaria Nutricional) (2003), Managua (www.sissan.gob.ni).
- Steinhart, J.S. y C.E Steinhart (1974), “Energy use in the U.S. Food System” en *Revista Science*, Vol. 184, N° 4134, April.
- UNICEF (United Nations Children’s Fund) (2003), Estado mundial de la infancia, 2003 (<http://www.unicef.org/spanish/sowc03/tables/table2.html>).

- _____ (2002a), Programa de cooperación Nicaragua 2002-2006. Plan Maestro de Operaciones (Abstract), Managua.
- _____ (2002b), Programa de cooperación El Salvador 2002-2006, San Salvador.
- _____ (1993), Estado mundial de la infancia, 1993, New York.
- UNDP (United Nations Development Programme) (2001), Informe sobre Desarrollo Humano en El Salvador (IDHES2001), San Salvador, July.
- _____ (n.d), Sistema de información sobre los terremotos en El Salvador. ([http://www. Terremotoelsalvador.org.sv](http://www.Terremotoelsalvador.org.sv)).
- _____ (1990), Desarrollo sin pobreza: II conferencia sobre la pobreza en América Latina y el Caribe, Quito, 20-23 November.
- United Nations, (IDB) Inter-American Development Bank/SECEP (Secretaría de Coordinación y Estrategia de la Presidencia) and CONPES (Consejo Nacional de Planificación Económica y Social) (2003), “Metas de Desarrollo”(Report, Millenium Summit), Managua.
- Veiga, J.E. (2000), Desenvolvimento Territorial do Brasil: do Entulho varguista ao Zoneamento Ecológico-Econômico, Departament of Economics, Universidad de São Paulo, Brazil.
- Webb, P. (2002), Los alimentos como ayuda: tendencias, necesidades y retos en el siglo XXI. Document N° 14, Roma (www.wfp.org).
- WFP (World Food Programme/FAO) (2003*), Programa en el país – El Salvador (2003-2007), WFP/EB.3/2003/7/1, Rome, July.
- _____ (2003b), aumentos de presupuesto de proyectos de desarrollo aprobados por el Director Ejecutivo entre el 1 de enero y el 30 de junio de 2003. WFP/EB.3/2003/9-B, Rome, September.
- _____ (2002a), Protacted Relief and Recovery Operation – Central America 10212,WFP/EB.3/2002/9-b2, Rome, September.
- _____ (2002b), Draft full report of the Thematic Evaluation of the Protacted Relief and Recovery Operations (PRRO), Category, Rome, January.
- _____ (2002c) Standarized food and livelihood assessment in support of the Central American PRRO (final draft), September.
- _____ (2002d) VAM Standard Analytical Framework. Rome, July (<http://www.wfp.org/operation/vam>)
- _____ (2001a), Programa en el país – Nicaragua (2002-2006), WFP/EB.2/2001/5/5,Rome, April
- _____ (2001b) Programa en el país – Guatemala (2001-2004), WFP/EB.2/2001/5/5,Rome, May.
- _____ (2001c), Análisis y cartografía de la vulnerabilidad a la inseguridad alimentaria en Nicaragua (VAM), Managua, January.
- _____ (2001d) Programa en el país – Honduras (2002-2006), WFP/EB.3/2001/8/9,Rome, September.
- _____ (1999), South Africa Regional Office, Vulnerability Analysis: concepts, indicators and measurements, Maputo, March.

Statistical appendix

Table 1
LATIN AMERICA AND THE CARIBBEAN: DEMOGRAPHIC INDICATORS, 1990-2000

Country	Natural population growth a/		Total fertility rate		Urban population		Population under the age of 15		Population aged 65 or more	
	(Annual average growth rate)				(Percentage)		(Percentage)		(Percentage)	
	1990-1995	2000-2005	1990-1995	2000-2005	1990	2000	1990	2000	1990	2000
Antigua & Barbuda	0.3	0.3	...	...	35.4	36.8	...	...	...	...
Dutch Antilles	...	...	2.1	2.1	...	...	26.6	25.1	...	...
Argentina	1.3	1.2	2.8	2.4	86.9	89.6	30.6	27.7	6.9	7.9
Aruba	...	...	...	...	...	...	...	...	8.9	9.7
Bahamas	2.1	1.2	2.3	2.3	83.6	88.5	32.5	29.6	...	...
Barbados	0.4	0.4	1.6	1.5	44.8	50.0	24.1	20.6	4.3	5.3
Belize	1.8	1.9	4.2	2.9	...	...	44.1	38.5	11.7	10.5
Bolivia	2.4	2.2	4.8	3.9	55.6	64.6	41.2	39.6	4.3	4.4
Brazil	1.5	1.2	2.5	2.1	74.7	79.9	34.7	28.8	3.6	4.0
Chile	1.6	1.2	2.5	2.4	82.8	85.7	30.1	28.5	4.3	5.2
Colombia	1.9	1.7	3.0	2.6	69.3	74.5	32.7	32.7	6.1	7.2
Costa Rica	3.1	2.0	3.0	2.7	46.7	50.4	36.4	32.3	4.2	4.7
Cuba	0.6	0.3	1.6	1.6	74.8	79.9	23.1	21.2	4.2	5.1
Dominica	-0.1	-0.1	...	...	...	...	...	...	8.4	9.6
Ecuador	2.2	1.7	3.5	2.8	55.4	62.7	39.0	33.8	...	...
El Salvador	2.1	1.8	3.5	2.9	49.8	55.2	40.8	35.6	4.1	4.7
Granada	0.3	0.3	...	...	...	...	...	...	4.2	5.0
Guatemala	2.6	2.6	5.4	4.4	38.0	39.4	45.9	43.6	...	...
Guyana	0.3	0.2	2.6	2.3	33.2	36.3	36.7	30.6	3.2	3.6
Haiti	1.9	1.8	4.8	4.0	29.5	35.7	47.3	40.2	4.7	5.0
Honduras	2.9	2.5	4.9	3.7	40.8	48.2	45.2	41.7	3.0	3.4
Jamaica	0.9	0.9	2.8	2.4	51.5	56.1	35.2	31.5	7.3	7.2
Mexico	1.8	1.4	3.1	2.5	71.4	75.4	38.6	33.1	4.0	4.7
Nicaragua	2.9	2.6	4.8	3.8	52.5	55.3	46.4	42.6	4.0	4.7
Panama	1.9	1.4	2.9	2.4	53.8	57.6	35.3	31.3	2.8	3.1
Paraguay	2.7	2.5	4.6	3.8	48.6	56.1	42.0	39.5	5.0	5.5
Peru	1.7	1.6	3.7	2.9	68.7	72.3	38.2	34.5	3.7	3.5
Dominican Republic	1.7	1.6	3.2	2.7	58.3	65.0	38.4	34.5	3.9	4.7
Saint Kitts & Nevis	-0.9	-0.7	...	...	34.6	34.1	...	...	3.4	4.3
St Vincent & the Grenadines	0.7	0.6	...	...	40.6	54.8	...	...	...	...
Saint Lucia	1.2	1.1	3.0	2.5	37.2	37.8	37.4	31.8	...	...
Suriname	0.4	0.4	2.4	2.0	65.4	74.1	35.8	30.5	6.9	5.4
Trinidad & Tobago	0.8	0.5	2.1	1.5	69.1	74.1	33.5	25.0	4.2	5.5
Uruguay	0.7	0.7	2.5	2.3	90.5	92.6	26.0	24.8	6.3	6.6
Venezuela	2.3	1.8	3.3	2.7	83.9	87.4	38.2	34.0	11.5	12.9
									3.6	4.4

Source: ECLAC, *Statistical Yearbook for Latin America and the Caribbean*, LG/G.2190-P, United Nations publication, Sales No. E/S.03.II.G.1, ECLAC, Santiago, Chile, and ECLAC, Population Division (CELADE), population database (<http://w.w.eclac.cl/bases/estad/esp.htm>) y CEPAL, División de Población (CELADE), base de datos sobre población (<http://w.w.eclac.cl/ceclade/proyecciones/intentoBD-2002.htm>).

a/ Growth rate implicit in the population projections prepared according to the medium-fertility hypothesis.

Table 2
LATIN AMERICA AND THE CARIBBEAN: EDUCATIONAL INDICATORS, 1990-2000/2001

Country	Juvenile illiteracy rate (Percentage of young people between 15 and 24 who are illiterate)		Adult illiteracy rate (Percentage of persons aged 15 or more who are illiterate)		Net enrolment rate in primary education		Ratio of girls to boys in net primary enrolment	
	1990	2001	1990	2001	1990/1991 a/	2000/2001 b/	1990/1991	2000/2001 c/ d/
	Antigua & Barbuda	4.0
Dutch Antilles	...	...	...	...	...	...	...	...
Argentina	1.8	1.4	4.7	3.1	...	107	...	0.96
Aruba	...	...	...	...	...	...	...	...
Bahamas	3.5	2.7	1.0	4.5	96	83	...	0.93
Barbados	0.2	0.2	1.2	0.3	78	105	...	0.97
Belize	4.0	1.9	5.0	6.6	98	100	0.94	0.94
Bolivia	7.4	3.9	22.5	14.0	91	97	0.90	0.95
Brazil	8.2	4.5	18.9	12.7	86	97	...	0.93
Chile	1.9	1.1	6.6	4.1	88	89	...	0.94
Colombia	5.1	3.0	13.3	8.1	...	89	1.11	0.96
Costa Rica	2.6	1.7	7.2	4.3	86	91	0.94	0.93
Cuba	0.7	0.2	6.0	0.3	92	97	0.93	0.91
Dominica	...	...	3.0	...	...	...	0.96	0.93
Ecuador	4.5	2.7	14.2	8.2	...	99	...	0.97
El Salvador	16.2	11.5	27.0	20.8	75	81	...	0.93
Granada	...	...	...	...	...	...	...	...
Guatemala	26.6	20.4	44.9	30.8	...	84	...	0.88
Guyana	0.2	0.2	...	...	93	98	0.97	0.95
Haiti	45.2	34.7	47.0	49.2	22	...	0.93	...
Honduras	20.3	14.5	26.9	24.4	89	88	0.99	0.98
Jamaica	8.8	5.7	1.6	12.7	96	95	0.99	0.96
Mexico	4.8	2.8	12.7	8.6	100	103	0.94	0.95
Nicaragua	31.8	28.0	19.0	33.2	72	81	1.04	0.98
Panama	4.7	3.1	11.9	7.9	91	100	0.92	0.93
Paraguay	4.4	2.8	9.9	6.5	93	92	0.93	0.94
Peru	5.5	3.1	14.9	9.8	...	104	...	0.96
Dominican Republic	12.5	8.6	16.7	...	...	93	...	0.94
Saint Kitts & Nevis	...	...	...	...	...	...	...	0.97
Saint Vincent & the Grenadines	...	...	16.0	...	...	...	...	0.94
Saint Lucia	...	...	7.0	...	...	100	0.95	0.90
Suriname	...	...	5.1	...	...	92	0.96	0.96
Trinidad & Tobago	0.4	0.2	4.0	1.6	91	92	0.97	0.95
Uruguay	1.3	0.9	3.8	2.4	91	90	0.95	0.94
Venezuela	4.0	1.9	11.9	7.2	88	88	0.99	0.94

a/ In Bahamas, Barbados, Belize, Honduras and Uruguay the data refer to the 1991/1992 school year, while the data for El Salvador are for the 1992/1993 school year.

b/ The data for Argentina, Brazil, Chile, Jamaica, Mexico, Paraguay, Peru and Uruguay are preliminary figures, while the figures for Bahamas, El Salvador, Guyana and Peru refer to the 1999/2000 school year.

c/ The figures for Argentina, Brazil, Chile, Jamaica, Mexico, Paraguay, Peru and Uruguay are preliminary estimates by the UNESCO Institute for Statistics.

d/ The figures for Bahamas and Guyana refer to the 1999/2000 school year.
e/ For the first period, the figures for Brazil, El Salvador y Santa Lucia correspond to the 1991/1992 school year, and for the second period, the figures for the Dominican Republic and Venezuela refer to the 1998/1999 school year.

(Continuation)

Table 2 (conclusion)

Country	Net enrollment rate in secondary education		Public social spending on education (as percentage of GDP)		Public social spending on education (as percentage of total public spending)		Per capita public social spending on education (1987 dollars)	
	1990/1991	2000/2001 a/ b/	1990-1991	2000-2001	1990-1991	2000-2001	1990-1991	2000-2001
Antigua & Barbuda	...	...	...	...	...	...	...	...
Dutch Antilles	...	...	...	...	...	...	...	...
Argentina	...	79	3.6	5.0	11.6	14.6	226	385
Aruba	...	...	...	...	...	...	...	...
Bahamas	...	...	...	...	...	...	...	...
Barbados	...	85	...	...	...	...	...	...
Belize	29	63	...	...	...	...	...	...
Bolivia	29	68	...	6.4	...	21.8	...	66
Brazil	15	71	3.7	3.8	9.8	12.2	162	185
Chile	55	75	2.4	4.0	12.0	17.6	87	238
Colombia	...	57	2.7	3.8	11.4	9.6	63	97
Costa Rica	36	49	3.8	5.0	9.4	11.1	114	189
Cuba	69	82	...	...	...	...	...	...
Dominica	...	...	...	...	...	...	...	...
Ecuador	...	48	2.9	3.0	18.3	10.1	45	45
El Salvador	...	39	...	2.6	...	19.0	...	51
Granada	...	...	...	...	...	...	...	...
Guatemala	...	26	1.6	2.6	14.2	19.2	25	46
Guyana	71	...	...	...	...	...	...	...
Haiti	...	...	...	...	...	...	...	...
Honduras	...	...	4.3	5.8	19.8	22.6	32	45
Jamaica	64	74	...	...	...	...	...	...
Mexico	45	60	2.6	4.1	16.4	25.6	104	190
Nicaragua	...	36	4.3	6.0	13.0	17.6	19	28
Panama	51	62	4.6	6.0	10.2	11.6	125	199
Paraguay	26	47	1.2	4.0	15.8	20.6	22	70
Peru	...	61	1.6	2.4	13.8	14.4	31	58
Dominican Republic	...	40	1.2	3.0	10.4	17.6	17	67
Saint Kitts & Nevis	...	...	...	...	...	...	...	...
Saint Vincent & the Grenadines	...	...	...	...	...	...	...	...
Saint Lucia	...	80	...	...	...	...	...	...
Suriname	...	43	...	...	...	...	...	...
Trinidad & Tobago	...	71	...	...	...	...	...	...
Uruguay	...	70	2.4	3.4	9.1	10.7	130	213
Venezuela	19	50	3.4	5.0	13.2	16.8	128	178

Source: UNDP, Human Development Report 1992 and UNDP, Human Development Report 2003; ECLAC, Social Panorama of Latin America 2002-2003, and UNESCO, Institute for Statistics.

a/ The data for Argentina, Brazil, Chile, Jamaica, Mexico, Paraguay, Peru and Uruguay are preliminary estimates of the UNESCO Institute for Statistics.

b/ The figures for El Salvador and Peru refer to the 1998/1999 school year.

c/ Except for Argentina, Brazil, Chile, Costa Rica, Jamaica and Peru, where the sources are of national origin, the figures are estimates of the UNESCO Institute for Statistics.

Table 3
LATIN AMERICA AND THE CARIBBEAN: HEALTH INDICATORS, 1983/1989-2001

Country	Life mortality among expectancy at birth		Maternal death rate		Births attended by specialized personnel			mortality		children under 5	
	1990	2001 a/	1988	1995	1983/1989	(Percentage)	1995/2001 b/	1990	2001	1990	2001
	(deaths per 1,000 live births)	(deaths per 1,000 live births)	(deaths per 1,000 live births)	(deaths per 1,000 live births)	(Percentage)	(births per 1,000 live births)					
Antigua & Barbuda	72.0	73.9	...	...	90	100	12	...	...	...	...
Dutch Antilles	...	...	...	...	...	...	...	...	...	...	...
Argentina	71.0	73.9	140	85	...	98	16	25	28	19	19
Aruba	...	...	...	...	...	...	...	...	...	...	...
Bahamas	71.5	...	...	10	...	99	13	24	29	16	16
Barbados	75.1	...	35	33	93	91	14	16	16	14	14
Belize	69.5	71.7	...	140	80	77	34	39	49	40	40
Bolivia	54.5	63.3	600	550	42	59	60	87	122	77	77
Brazil	65.6	67.8	230	260	95	88	31	50	60	36	36
Chile	71.8	75.8	67	33	98	100	10	16	19	12	12
Colombia	68.8	71.8	150	120	71	86	23	29	36	23	23
Costa Rica	74.9	77.9	36	35	97	98	9	15	17	11	11
Cuba	75.4	76.5	54	24	99	100	7	11	13	9	9
Dominica	76.0	72.9	...	...	96	100	14	19	23	15	15
Ecuador	66.0	70.5	200	210	56	69	24	43	57	30	30
El Salvador	64.4	70.4	200	180	50	51	33	46	60	39	39
Granada	...	...	...	...	...	...	20	30	...	...	...
Guatemala	63.4	65.3	250	270	34	41	43	58	82	58	58
Guyana	64.2	...	200	150	96	95	65	65	90	72	72
Haiti	55.7	49.1	600	1 100	40	24	79	102	150	123	123
Honduras	64.9	68.8	220	220	66	54	31	47	61	38	38
Jamaica	73.1	75.5	120	120	90	90	17	17	20	20	20
Mexico	69.7	73.1	150	65	94	86	24	37	46	29	29
Nicaragua	64.8	69.1	200	250	41	65	36	52	66	43	43
Panama	72.4	74.4	60	100	89	90	19	27	34	25	25
Paraguay	67.1	70.5	200	170	30	58	26	30	37	30	30
Peru	63.0	69.4	300	240	78	59	58	58	75	30	30
Dominican Republic	66.7	66.7	200	110	90	96	41	53	65	47	47
Saint Kitts & Nevis	...	70.0	...	...	...	100	20	30	36	24	24
Saint Vincent & the Grenadines	70.0	73.8	...	...	73	100	22	21	26	25	25
Saint Lucia	70.5	72.2	...	...	99	100	17	19	24	19	19
Suriname	69.5	70.8	120	230	80	85	26	35	44	32	32
Trinidad & Tobago	71.6	71.5	120	65	98	99	17	21	24	20	20
Uruguay	72.2	75.0	50	50	97	99	14	20	24	16	16
Venezuela	70.0	73.5	130	43	69	95	19	23	27	22	22

Source: UNDP, *Human Development Report 1992*; UNDP, *Human Development Report 2003*; PAHO Web (<http://www.paho.org/Spanish/SHA/covedata/tabulator/helpGUtabulator.htm>); UNICEF, *The State of the World's Children, 1993* and UNICEF, *The State of the World's Children, 2003*.

Notes: a/ For Antigua y Barbuda, Dominica and Saint Kitts y Nevis, the figures were supplied by the Secretariat of the Organization of Eastern Caribbean States, on the basis of national sources. b/ For Antigua and Barbuda, Bahamas, Belize and St. Vincent and the Grenadines, the data refer to different periods, different definitions of the indicators, or non-nationwide coverage.

Table 3 (conclusion)

Country	Children under 5 with moderate to severe weight deficiency (Percentage)				Children under 5 with chronic malnutrition (Percentage)		Undemourished population (Percentage)		Doctors (Per 100,000 inhabitants)		Public social spending on health (As a percentage of GDP)	
	1995/2001		1980/1990		1995/2001		1990-1992 a/		1984/1989		1990-1991	
	1980/1991	1995/2001	1980/1990	1995/2001	1995/2001	1990-1992 a/	1999-2001	1984/1989	1999	1990-1991	2000-2001	
Antigua & Barbuda	...	10	...	7	...	...	...	...	115	...	...
Dutch Antilles	...	...	...	...	...	...	...	...	140	...	...
Argentina	...	5	...	12	...	2	2	270	268	4.3	5.0	
Aruba	...	...	...	...	...	...	...	...	128	...	...
Bahamas	...	...	...	...	...	...	...	...	163	...	...
Barbados	...	6	...	7	...	...	...	89	137	...	...
Belize	...	6	...	...	...	...	...	...	...	...	...
Bolivia	13	8	38	27	...	26	22	65	32	3.1	3.6	
Brazil	7	6	15	11	12	9	9	93	144	3.6	3.0	
Chile	3	1	10	2	8	4	4	81	130	1.8	2.8	
Colombia	10	7	17	15	17	13	13	81	...	1.0	4.3	
Costa Rica	6	5	8	6	7	7	6	104	150	4.9	5.2	
Cuba	...	4	...	5	8	...	11	189	582	...	...
Dominica	...	5	...	6	...	...	...	34	49	...	...
Ecuador	17	14	26	27	8	8	4	122	132	0.9	1.1	
El Salvador	15	12	30	23	12	12	14	35	118	1.3	1.5	
Granada	...	...	...	...	...	...	...	...	...	...	...
Guatemala	34	24	58	50	16	16	25	46	90	0.9	1.0	
Guyana	...	12	24	21	21	14	14	16	18	...	...
Haiti	37	17	34	32	65	49	49	14	25	...	...
Honduras	21	17	37	39	23	23	20	66	83	2.6	3.0	
Jamaica	7	4	9	10	14	14	9	49	25	...	...
Mexico	14	8	18	18	5	5	5	81	156	3.0	1.8	
Nicaragua	11	12	23	25	30	29	29	64	62	4.7	4.8	
Panama	16	8	22	10	20	20	26	100	121	6.1	8.2	
Paraguay	4	5	...	...	18	13	13	68	49	0.3	1.1
Peru	13	7	32	26	27	27	11	96	103	0.8	1.8	
Dominican Republic	13	5	21	11	27	27	25	56	190	1.0	1.8	
Saint Kitts & Nevis	...	...	...	...	...	...	...	46	117	...	...
St. Vincent and the Grenedines	...	...	...	...	...	...	...	27	88	...	...
Saint Lucia	...	14	...	11	...	...	...	26	58	...	...
Suriname	...	...	...	...	13	11	11	79	50	...	...
Trinidad & Tobago	7	7	12	5	13	12	12	106	75	...	...
Uruguay	7	4	16	10	6	6	3	196	370	2.9	2.8	
Venezuela	6	4	14	15	11	11	18	143	197	1.6	1.4	

Source: UNDP, *Human Development Report 1992*; UNDP, *Human Development Report 2003*; FAO, *The State of Food Insecurity in the World, 2003*; UNICEF, *The State of the World's Children, 1993*; UNICEF, *The State of the World's Children, 2003* and ECLAC, *Social Panorama of Latin America 2002-2003*.

Note: ^{a/} The first figure for Peru corresponds to the 1992-1994 period (ECLAC estimate based on the FAO methodology).

Table 4
LATIN AMERICA AND THE CARIBBEAN: INDICATORS OF ACCESS TO BASIC SERVICES, 1990-2000

Country	Population with access to improved water sources						Population with access to improved excreta disposal systems						
	Nationwide		Urban areas		Rural Areas		Nationwide		Urban areas		Rural Areas		
	1990	2000	1990	2000	1990	2000	1990	2000	1990	2000	1990	2000	
Antigua & Barbuda	...	91	...	95	...	89	...	95	...	...	98	...	...
Dutch Antilles	...	...	...	...	...	...	...	...	...	...	...	...	...
Argentina	94	...	97	...	73	...	75	...	87	...	42	...	...
Aruba	...	...	...	...	...	...	...	...	...	...	...	...	...
Bahamas	...	97	...	...	...	86	100	...	...	100	...	...	...
Barbados	...	100	...	100	...	100	...	100	...	100	...	...	...
Belize	...	92	...	100	...	82	...	50	...	71	...	...	...
Bolivia	71	83	91	95	47	64	69	73	73	86	39	41	44
Brazil	83	87	93	95	54	53	62	76	82	84	16	44	44
Chile	90	93	98	99	49	58	81	96	98	96	...	...	...
Colombia	94	91	98	99	84	70	59	86	96	96	...	...	...
Costa Rica	...	95	...	99	...	92	97	93	...	89	95	97	...
Cuba	...	91	...	95	...	77	86	...	...	99	74	94	...
Dominica	...	97	...	100	...	90	...	83	...	86	...	83	...
Ecuador	71	85	82	90	58	75	53	86	88	92	26	76	...
El Salvador	68	77	88	91	48	64	77	82	87	89	65	73	...
Granada	...	...	...	97	...	...	...	...	...	...	...	...	...
Guatemala	76	92	88	98	69	88	67	...	...	83	50	80	...
Guyana	...	94	...	98	...	91	...	87	...	97	...	81	...
Haiti	53	46	59	49	50	45	26	28	33	50	16	16	...
Honduras	82	88	89	95	78	81	82	75	88	93	71	58	...
Jamaica	93	92	98	98	87	85	...	99	99	99	...	99	...
Mexico	79	88	90	95	52	69	77	74	87	88	38	31	...
Nicaragua	70	77	93	91	44	59	59	85	97	95	28	73	...
Panama	...	90	...	99	...	79	91	92	...	99	81	82	...
Paraguay	63	78	80	93	46	59	...	94	96	94	...	94	...
Perú	74	80	88	87	42	62	61	71	77	79	23	50	...
Dominican Republic	83	86	92	90	71	78	77	67	70	70	68	61	...
Saint Kitts and Nevis	...	98	...	...	...	...	...	96	...	...	...	...	...
St Vincent and the Grenadines	...	93	...	...	...	...	...	96	...	...	...	...	...
Saint Lucia	...	98	...	...	...	...	85	89	...	...	82	...	...
Suriname	...	82	...	93	...	50	...	...	...	99	...	...	...
Trinidad and Tobago	...	90	...	...	...	...	96	...	...	...	92	...	...
Uruguay	...	98	...	98	...	93	51	94	...	95	...	82	...
Venezuela	...	83	...	85	...	70	72	68	...	71	60	47	...

Source: UNDP, Human Development Report 2003, and ECLAC, Statistical Yearbook 2002.

Table 5
LATIN AMERICA AND THE CARIBBEAN: INDICATORS OF ECONOMIC GROWTH UNEMPLOYMENT AND POVERTY, 1990-2002

Country	Per capita GDP (1985 dollars)		Economic growth (Annual rate of variation of GDP)		Urban unemployment (Percentage of active population aged 15 or more)		Urban unemployment among persons aged 15 to 24 (Percentage of active population aged between 15 and 24)		Poor population a/ (Percentage)		Indigent Population a/ (Percentage)	
	1990	2002	1990-1996	1997-2002	1990	2002	1990	2002	1990	2002	1990	2002
	Antigua and Barbuda	5 985	7 630	2.8	3.9
Dutch Antilles	...	...	...	...	...	...	...	...	...	...	...	...
Argentina	5 545	6 065	4.5	-1.5	5.9	19.0	13.0	33.8	21.2	41.5	5.2	18.6
Aruba	...	...	...	...	...	...	...	...	...	...	...	...
Bahamas	...	...	...	...	...	...	...	...	...	...	...	...
Barbados	6 399	6 674	-0.6	1.7	...	...	...	...	...	...	...	...
Belize	2 150	2 699	4.7	5.2	...	...	...	...	...	...	...	...
Bolivia	821	938	4.2	2.8	9.4	6.4	17.4	11.2	53.1	52.0	23.2	21.3
Brazil	3 659	4 340	1.9	1.8	4.5	10.7	8.3	20.5	48.0	37.5	23.4	13.2
Chile	3 779	5 952	7.0	3.2	8.7	10.6	17.9	22.6	38.6	20.6	12.9	5.7
Colombia	2 162	2 277	3.7	0.9	17.2	17.2	19.7	32.0	52.7	50.6	20.0	23.7
Costa Rica	2 960	3 762	4.4	4.5	5.3	6.8	10.5	16.4	26.2	20.3	9.8	8.2
Cuba	5 034	3 985	-5.4	3.1	...	...	...	...	...	...	...	...
Dominica	2 753	2 749	2.6	-0.6	...	...	...	...	...	...	...	...
Ecuador	1 670	1 776	3.2	1.9	6.1	9.1	13.5	17.4	62.1	49.0	26.2	19.4
El Salvador	1 406	1 761	5.0	2.9	9.9	7.0	19.3	13.2	54.2	48.9	21.7	22.1
Granada	2 472	3 654	2.6	3.4	...	...	...	...	...	...	...	...
Guatemala	1 353	1 554	4.0	3.6	3.5	6.0	7.1	11.1	...	...	...	30.3
Guyana	434	746	6.5	1.8	...	...	...	...	...	...	...	...
Haiti	567	416	-2.6	1.6	...	...	...	...	...	...	...	...
Honduras	686	713	2.9	2.9	...	...	...	...	...	...	...	...
Jamaica	2 020	2 028	2.1	0.3	...	...	11.2	9.3	80.5	77.3	60.6	54.4
Mexico	4 048	4 690	2.6	3.8	3.3	3.4	8.1	7.2	47.8	39.4	18.8	12.6
Nicaragua	454	484	1.9	4.6	...	12.5	...	21.5	73.6	69.3	48.4	42.3
Panama	2 512	3 123	5.4	2.8	18.6	19.4	35.1	35.1	39.6	25.3	16.0	8.9
Paraguay	1 697	1 477	2.8	0.2	6.3	11.5	15.5	21.4	49.9	50.1	18.8	18.4
Peru	1 679	2 376	3.5	2.4	...	7.2	...	12.4	...	54.8	...	24.4
Dominican Republic	1 378	2 133	3.1	6.4	19.7	16.8	34.1	31.0	...	44.9	...	20.3
Saint Kitts and Nevis	3 926	5 933	4.1	3.2	...	...	...	...	...	...	...	...
St. Vincent and the Grenadines	1 740	2 221	3.3	2.7	...	...	...	...	...	...	...	...
Saint Lucia	2 476	2 538	3.0	0.3	...	...	...	...	...	...	...	...
Suriname	1 331	1 315	0.0	0.6	...	...	...	...	...	...	...	...
Trinidad and Tobago	4 009	5 955	2.1	5.6	...	...	...	...	...	...	...	...
Uruguay	4 707	4 946	3.6	-1.8	8.9	16.9	24.4	37.9	17.8	15.4	3.4	2.5
Venezuela	3 045	2 796	3.4	-0.1	10.2	16.2	19.3	28.2	40.0	48.6	14.6	22.2

Source: ECLAC, Statistical Yearbook 2002 (<http://www.eclac.cl/badestat/anuario/esp.htm>) and ECLAC, Social Panorama of Latin America 2002-2003.

Note: ^{a)} The poor population includes de indigent or extremely poor population. The geographical coverage of the figures for Argentina corresponds to Greater Buenos Aires, while that for Bolivia, Colombia, Ecuador, Panama, Paraguay and Uruguay corresponds to urban areas. The initial reference year is 1989 in Bolivia and México, 1991 in Colombia and Panama, 1995 in El Salvador, 1993 in Nicaragua, and 1994 in Paraguay; while the final year is 2000 in Chile and 2001 in Brazil, El Salvador, Nicaragua, Paraguay and Peru.

Table 6
LATIN AMERICA AND THE CARIBBEAN: INDICATORS OF INCOME CONCENTRATION^{a/}, 1990-2002

Country	Poverty gap b/ c/		Extreme poverty gap b/		Share of the poorest 40 percent of the population in total income b/		Share of the richest 10 percent of the population in total income		Gini index b/	
	1990	2002	1990	2002	1990	2002	1990	2002	1990	2002
	(Percentage)		(Percentage)		(Percentage)		(Percentage)			
Antigua & Barbuda	...	...	...	...	...	...	...	...	...	...
Dutch Antilles	...	...	...	...	...	...	...	...	...	...
Argentina	7.2	19.1	1.6	7.5	14.9	13.4	34.8	42.1	0.590	0.590
Aruba	...	...	...	...	...	...	...	...	...	...
Bahamas	...	...	...	...	...	...	...	...	...	...
Barbados	...	...	...	...	...	...	...	...	...	...
Belize	...	...	...	...	...	...	...	...	...	...
Bolivia	24.5	34.4	9.7	19.5	12.0	9.5	38.2	41.0	0.538	0.614
Brazil	23.5	17.3	9.7	5.8	9.5	10.2	43.9	46.8	0.627	0.639
Chile	14.8	7.1	4.3	2.1	13.2	13.8	40.7	40.3	0.554	0.559
Colombia	20.2	24.1	7.5	10.0	11.6	11.9	41.9	39.1	0.579	0.575
Costa Rica	10.7	8.4	4.8	3.9	16.7	14.4	25.6	30.2	0.438	0.488
Cuba	...	...	...	...	...	...	...	...	...	...
Dominica	...	...	...	...	...	...	...	...	...	...
Ecuador	27.6	20.8	9.2	6.9	17.1	15.4	30.5	34.3	0.461	0.513
El Salvador	24.0	22.7	9.1	9.5	15.4	13.4	32.8	33.3	0.507	0.525
Granada	...	...	...	...	...	...	...	...	...	...
Guatemala	35.9	26.4	18.5	10.1	11.8	14.2	40.6	36.8	0.582	0.542
Guyana	...	...	...	...	...	...	...	...	...	...
Haiti	...	...	...	...	...	...	...	...	...	...
Honduras	50.2	45.3	31.5	26.6	10.1	11.3	43.1	39.4	0.615	0.588
Jamaica	...	...	...	...	...	...	...	...	...	...
Mexico	18.7	13.9	5.9	3.5	15.8	15.7	36.6	33.2	0.536	0.514
Nicaragua	41.9	36.9	24.3	19.0	10.4	12.2	38.4	40.6	0.582	0.579
Panama	17.9	10.0	7.3	3.3	13.3	14.2	34.2	32.7	0.544	0.515
Paraguay	16.1	30.3	3.6	15.4	18.6	12.8	28.9	37.3	0.447	0.570
Peru	...	...	...	...	...	13.4	...	33.5	...	0.524
Dominican Republic	...	...	...	...	...	12.0	...	38.3	...	0.544
Saint Kitts and Nevis	...	...	...	...	...	...	...	...	...	...
St. Vincent and the Grenadines	...	...	...	...	...	...	...	...	...	...
Santa Lucia	...	...	...	...	...	...	...	...	...	...
Suriname	...	...	...	...	...	...	...	...	...	...
Trinidad and Tobago	...	...	...	...	...	...	...	...	...	...
Uruguay	5.3	4.5	0.9	0.6	20.1	21.6	31.2	27.3	0.492	0.455
Venezuela	15.7	22.1	5.0	9.2	16.7	14.3	28.7	31.3	0.471	0.500

Source: ECLAC (2003a), *Social Panorama of Latin America 2002-2003* and, in the case of the poverty gaps, special tabulations of household surveys of the respective countries.
Notes: ^{a/} The geographical coverage of the figures for Argentina corresponds to Greater Buenos Aires, and that of the figures for Bolivia, Colombia, Ecuador, Panama, Paraguay and Uruguay to urban areas. The initial reference year in Bolivia and México is 1989, in Panama is 1991, in El Salvador, 1995, in Nicaragua, 1993, and in Paraguay, 1994, while the final year in Chile is 2000 and 2001 in Brazil, El Salvador, Nicaragua, Paraguay and Peru. ^{b/} Includes persons with an income equal to zero. ^{c/} The poor population includes the indigent and extremely poor populations.



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