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Food Security, Food Insecurity and Food Vulnerability in Central America, Part 1

Most often when these words are used in print they are associated with areas of Africa or South-Asia, however, the crisis of food security, or more aptly put food insecurity and vulnerability, is a growing concern in parts of Central America. For a variety of reasons in recent years the availability and affordability of food for many in Central America has been silently turning into a crisis. There are many places to point fingers at as a cause, such as global climate change, environmental degradation and lack of arable land, historical and cyclic poverty, systemic corruption, and high food prices due to global market forces, which have all been contributors to the dilemma. The differences in the levels of food security or malnutrition in the countries of Central America are often related to the holistic security of the country itself and the factors mentioned above.

Definitions

In the lexicon of governmental terminology and etymology, often times these terms, and how and when they are used, can become confusing and should be further explained. The Food and Agriculture Association of the United Nations (FAO) define the three categories as follows:

Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. Household food security is the application of this concept at the family level, with individuals within households as the focus of concern.

Food insecurity exists when people are undernourished as a result of the physical unavailability of food, their lack of social or economic access to adequate food, and/or inadequate food utilization. Food-insecure people are those individuals whose food intake falls below their minimum calorie (energy) requirements, as well as those who exhibit physical symptoms caused by energy and nutrient deficiencies resulting from an inadequate or unbalanced diet or from the body's inability to use food effectively because of infection or disease. An alternative view would define the concept of food insecurity as referring only to the consequence of inadequate consumption of nutritious food, considering the physiological utilization of food by the body as being within the domain of nutrition and health.

Vulnerability refers to the full range of factors that place people at risk of becoming food-insecure. The degree of vulnerability of individuals, households or groups of people is determined by their exposure to the risk factors and their ability to cope with or withstand stressful situations.

The FAO estimates that 22% of the population of Central America suffers from under-nutrition and food insecurity in terms of the average calorie requirements of the population. Almost 21% of children suffer from moderate to serious chronic under-nutrition and almost 8% of all children under five years are underweight for their age. This can be broken down on a country-to-country basis from north to south as was done in the most-recently published report from the FAO in '03-'04.

- Guatemala, with a population of close to 13 million people, ranks second on the FAO food security study at 22% of the populace either undernourished or lacking adequate resources.
- Belize, known as a relatively secure country with a robust tourism industry, has a population of around 300,000 and undernourishment averaged 4% of population.
- Honduras has an estimated 23% undernourishment of the total population of over 7 million people.
- El Salvador is estimated by the FAO to have 11% of its 7 million people undernourished.
- Nicaragua, highest on the last FAO estimate, is reported to have 27% of its 5.5 million people not meeting adequate nutrition and food intake requirements.
- Costa Rica is a nation that in contrast to many of its neighbors is relatively prosperous and food secure. With a population of 4.5 million people, only an estimated 5% are undernourished.
- Panama, likewise, relative to its neighbors is a stable, fairly prosperous nation that has a population of 3.3 million, but 23% of its population is reportedly underfed and food insecure.

In Central America, as in the rest of Latin America and the Caribbean, food insecurity and hunger are phenomena that 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. As noted above, the four Central American countries with the most difficulty in the foreseeable future are Guatemala, El Salvador, Honduras and Nicaragua.

Causes and Effects

One way of looking at a level of food security in a given country is in its levels of food dependence or independence. This is, simply put, whether a country can grow enough food to maintain adequate levels of self-sufficiency or do the bulk of the country's main staple foods need to be imported. According to a '05 report by the United Nations Economic Commission for Latin America and the Caribbean (CEPAL), there are many differences distinguishing certain Central American countries regarding this characteristic.

In Costa Rica, practically all maize is now imported, while in the case of beans, after a long period of self-sufficiency that came to an end around '93, the country has started to import increasing quantities of this grain. The same is true of rice, albeit to a lesser extent.

Guatemala is nearly 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 that has been linked to other recent problems.

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 in '98, 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.

Belize was not listed in the study.

According to the CEPAL report, other related factors to a food security crisis are those of sustainable food production and environmental degradation. The main areas in which environmental problems have affected the food system are the loss of arable land and phytogenetic plant varieties and, together with the latter, the loss of ancestral knowledge of their cultivation and functions. This is compounded by the fact that much of what was once a rural, agrarian population is now becoming hyper-urbanized and, as a result, contributing factors such as deforestation are now creating a problem with usable land for food production. When speaking of deforestation in Central America, the causes usually named from the CEPAL study are:

- the colonization of the agricultural frontier by land-hungry peasants using a slash-burn system (the so-called "hamburger connection"), which quickly turned forests into pasture land to satisfy the booming demand for meat in the US that started in the '60s and '70s;
- the expansion of cash crops such as coffee and bananas; and
- the extraction of timber and firewood, as well as additional pressures due to population growth.

Other more recent complications for some countries of Central America lie in the global push for cleaner energy. The ethanol craze in the US, Brazil and Europe has caused an extremely rapid rise in maize prices worldwide. For countries such as Guatemala, El Salvador, Honduras and to a larger degree Mexico, whose population has historically almost exclusively relied upon maize as a food staple, they are now facing prices that in by some estimates have escalated as much as 50% since last year.

In the May/June '07 issue of *Foreign Affairs* magazine, authors C. Ford Runge and Benjamin Senauer make the argument that the current thirst for energy in the US, clean, green or not, will only be a detriment to its poorer southern neighbors. They state that:

The push for ethanol and other biofuels has spawned an industry that depends on billions of dollars of taxpayer subsidies, and not only in the United States. In 2005, global ethanol production was 9.66 billion gallons, of which Brazil produced 45.2% (from sugar cane) and the United States 44.5% (from corn). Global production of biodiesel (most of it in Europe), made from oilseeds, was almost one billion gallons.

The enormous volume of corn required by the US ethanol industry is sending shock waves through the global food system. (The US accounts for some 40% of the world's total corn production and over half

of all corn exports.) In March '07, corn futures in the US rose to over \$4.38 a bushel, the highest level in ten years. Wheat and rice prices also have surged to decade highs, because even as those grains are increasingly being used as substitutes for corn, farmers in the US and other countries are planting more acres with corn and fewer acres with other crops.

According to Runge and Senauer:

This might sound like nirvana to corn producers, but it is hardly that for consumers, especially in poor developing countries, who will be hit with a double shock if both food prices and oil prices stay high. The World Bank has estimated that in '01, 2.7 billion people in the world were living on the equivalent of less than \$2 a day; to them, even marginal increases in the cost of staple grains could be devastating. Filling the 25-gallon tank of an SUV with pure ethanol requires over 450 pounds of corn—which contains enough calories to feed one person for a year. By putting pressure on global supplies of edible crops, the surge in ethanol production will translate into higher prices for both processed and staple foods around the world. Biofuels have tied oil and food prices together in ways that could profoundly upset the relationships between food producers, consumers, and nations in the years ahead, with potentially devastating implications for both global poverty and food security.

The Mesoamerican Food Security Early Warning System (FEWS), a branch of the United States Agency for International Development (USAID), has issued warnings in its June '07 report concerning high prices of corn in Guatemala, Honduras (mostly the southern region) and Nicaragua due to the global market demand for corn for ethanol use. The impact of the high prices of maize and rice will be especially severe for landless households, who rely almost exclusively on purchased food.

“Even though this is a recurring situation at this time every year, this year could be worse than normal given the high price of maize. The depletion of reserves and the increased dependency on markets are reflected in an increase in the demand for staple cereals (maize and beans) and in their prices as well,” the report states.

These estimates are telling, but what are the reasons for the contrasting problems in such relatively close areas, and what is being done to combat this growing hazard? And is there such a thing as an apolitical food problem?

While environmental conditions, high food prices and other more natural events may trigger famine conditions, it is often government action or inaction that determines its severity, and often even whether or not a crisis will occur. How this issue is being dealt with by governmental and non-governmental bodies will be discussed in the next issue.

—Jason Howd

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