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Hunger in Northeastern Brazil

Introduction

Brazil is an important industrial power with the strongest economy in Latin America, but poverty is still widespread in the country. The focus of this paper will be on the problems in Northeastern Brazil, which is the poorest and least developed region of the country. Brazil's Northeast contains the single largest concentration of rural poverty in Latin America, and more than a quarter of the total population lives on slightly less than \$2 US per person per day (IFAD).

The first reason for hunger is poverty. The poor are hungry, and the hungry are usually poor (Anderson). This is basically true but what needs to be studied is why poverty is produced and what the government has been doing to eradicate these problems. Today the situation is even more complex. In Brazil the poverty situation is aggravated by government priorities.

This paper gives an overview of current projects such as Zero Hunger and São Francisco River Transposition. Zero Hunger is a program of the present government that gives access to food and good living conditions and dignity for those in most need. São Francisco River Transportation is a program to improve water supply.

Nowadays there is lack of policies directed to the basic infrastructure: conservation and improvement of roads and railroads, fluvial and coastal navigation, sanitation, telecommunications and energy. One of the biggest problems that Brazilians have to face are the dry lands in the Northeast. Dry land is land that is not irrigated and depends on rainfall (IFAD). The droughts are an ecological phenomenon that manifests itself in the reduction of farm production that provokes a social crisis and various political problems. The more evident consequences of the great droughts are hunger, malnutrition, misery and migration to the urban centers (agricultural exodus) (Andrade).

Lack of Water Resources

The half-dry climate is characterized by having only one period of rain per year. These rains, however, do not take care of the necessities of farming; not only because of the little amount but because they don't coincide with the time when the diverse cultures need water. These rains infiltrate the ground and accumulate water sources in the subsoil. The lack of water resources, therefore, is not characterized by the inexistence of water, since this can be found in the subsoil, but by the conditions of the small agriculturist to extract and to distribute efficiently this water for his plantation. Nowadays it is believed that more than 30 percent of the 1600 000 Km² (total area of Northeastern Brazil) has good conditions to retain water. (Suassuna)

Lack of Modern Technology

The implementation of an irrigation system is the basis for agricultural producers to become independent of climatic conditions. However, few use resources to implement the procedures and those that do, use outdated methods such as the system of rotating pivot and of aspersion, where water wastefulness is great. The Farm "Nova Canaã" adopted the same irrigation method used in Israel: dripping; where each plant receives exactly the amount of water that it needs, resulting in almost zero percent of waste. (Arca Universal)

Lack of Storage Conditions and Commercialization of Production

Because there is only one period of rain during the year in the Northeastern Region, producers harvest the same product at the same time. The result causes prices to fall for all production, based on supply and demand. That's why producers need to rotate their production so they don't need to sell at low prices. It is the infrastructure, lack of storage, as well as political corruption that make the producers become targets for profiteers, who impose prices to be paid for the harvest.

Lack of Basic Assistance in the Areas of Health and Education for the poor, especially for children not yet enrolled in school

A typical subsistence family farm in the Northeast consists of 2.3 people per household. In the poorest areas the size is 3.8 people per family. Their diet consists of meat, rice, beans, and flour prepared in various ways. Their basic education is from third to eighth grade. The income earned for 50 percent of the families in the Northeast is under \$2 US per day or \$100 reais (Brazilian) per month. Humber Zero contributes approximately 32 reais per month to each family. The money generated from the sale of cattle and crops such as depends on the agencies that purchase their livestock. The average size of a family farm is less than one square hectare. Major barriers to improving food and nutrition security are lack of water and the timing of the harvest. (IBGE)

Currently children who have not yet reached the age of basic education (seven years of age) are harmed because in this region, the existing public schools for child education do not meet the needs of the population. Children normally stay at home, helping parents with daily tasks instead of attending school. Consequently when they reach seven years of age, they go directly to public schools, beginning first grade with undetected educational deficiencies and not having the advantage of prior education such as pre-school, pre-kindergarten, and kindergarten. Many of these children go to third grade without being able to read and write.

Lack of Food Security

The Northeast has the highest level of food and nutrition insecurity of all Brazil. More than 55 percent of the 50 million citizens live with nutrition insecurity. The highest level of nutrition insecurity was found in the domiciles of the Maranhão (18percent) and Paraíba (15.1 percent) and lowest in Sergipe (3.7 percent). Intermediate values of about 10 percent had been observed in the Piauí (10.8 percent), Pernambuco (10.6 percent) and Alagoas (9.3 percent). (IBGE)

Zero Hunger

In Brazil, hunger does not exist due to lack of food. What Brazilians need is income to buy it regularly, in adequate amount and quality. As the income is poorly distributed throughout the country, a parcel of the population does not have access even to the minimal amount of food necessary to guarantee survival. Zero Hunger is a program created to fight structural hunger and its causes and also to guarantee food security for all Brazilians. The program has two fronts: a set of public policies; and the construction of one National Policy of Food and Nutritional Security. The program involves the three spheres of government (federal, state and municipal) and all ministries. However, the great protagonist of Zero Hunger is Brazilian society. The program's success depends on its mobilization (Governo Federal).

Brazil is a country of immense regional diversity. For this reason, the solutions for the economic and social challenges require a deep knowledge of each reality. And the Northeast is the first priority of this program (Governo Federal)

Implementation of Zero Hunger implies, on the part of the beneficiaries, to be involved in project management. It is through this popular organization that families will make good use of the benefits, guaranteeing positive impact on the generation of jobs in the city; they will fight infantile malnutrition and mortality; put an end to illiteracy; they will construct, in groups, watering holes and

public sanitary units, as well as help remodel houses in precarious state. It is also committed to activities that favor generation of jobs and income (Governo Federal).

Another Zero Hunger sub-project is Zero Thirst. The objective of this program is to help people to know how to coexist with a half-barren climate by constructing a new model of development for the region. To resolve the drought problem, a set of more than 800 entities (ONGs, churches, associations, unions etc.) working together with the Ministry of the Environment and with ANA (National Water Agency), develops P1MC - Program 1 Million of Watering holes. This program manages to construct 1,000,000 family watering holes to collect rain water for family consumption. About 50,000 watering holes already had been constructed, always with the participation of the benefited family (Governo Federal).

São Francisco River Transportation

The São Francisco River Transportation is a project with the intention of reducing the bad effects of droughts. The São Francisco River crosses Northeastern Brazil and the regions with the most diverse natural conditions. The extreme parts, both upper and lower, of the river, have good rainfall indices. The project generates controversy. The project basically constitutes the use of the river's water to supply other small rivers and dams of the Northeastern Region during periods of drought.

The problems affecting this project are great. The River São Francisco is dying and cannot resist its aggression against itself. Much cheaper and efficient solutions exist, such as the construction of watering holes, construction of small barrages, recovery of wells, construction of depositories and an insistent educational work for the optimum use of water. However, this project does not resolve the problem of poor and diffuse populations. This water will supply urban populations and big farms, but the poor will continue without access to the water.

Problem or Solution

There is no reason for these problems. The Northeast has unique characteristics. It has the only tropical half-dry climate in the world. This represents an enormous advantage. Therefore the constancy of the heat, the high luminosity and the low humidity of the air, when associated with irrigation, result in extremely favorable conditions for an efficient agriculture. Northeastern irrigated agriculture has a superior economic and technical viability to that one practiced in the culture of fruit and vegetables in any other region. It characterizes itself by its fast development of plantations that propitiate multiple harvests, bigger productivity, and better producer quality. Moreover, it has the capacity to generate a bigger number of jobs per unit of capital invested than other activity developed in the region. Although the climatic conditions of the half-dry Northeast have always been considered an obstacle to development and a root cause of poverty, the climatic conditions can and must now be faced as a great comparative advantage, as essential progress and a developmental factor of the region. Because of this enormous potential, some federal agents who act in the Northeast Region followed the federal government orientation in the Plan "Brazil in Action" and concentrated its resources in initiatives directed to the development of irrigated agriculture and the agro-industry in the half-dry Northeast. The Northeast Bank, for example, focused a specific strategy for the half-dry region: irrigated agriculture and agro-industry. Fourteen agro-industrial Polar Regions had been identified with good potential of development. Operations of financing the project already had been initiated to create new possibilities for the generation of job and income.

In recent years the BNB (Banco do nordeste Brazil) successfully implemented policies of investments in the poorest areas, having applied in half-dry regions most of the deriving resources of the Fundo Constitucional de Financiamento do Nordeste (FNE). Between 1995 and 1997, the Northeast Bank invested in the order of R\$ 6.5 billion in regional resources, generating 1.5 million new jobs. Of this total of resources, R\$ 2.2 billion had been invested in the half-dry zone, generating about 600 thousand jobs. Many other initiatives, directed toward the economy of the Northeast half-

dry zone, have been proposed in many levels of the government. (Galvão) Those include the following:

- Transforming the current agrarian, concentrative structure of land and income by means of Agrarian Reform that makes social justice for the agricultural worker.
- Establishing one irrigation policy that adopts technologies with easy access for agricultural workers.
- Irrigating the areas where water availability is needed and developing dry agriculture, such as xerófitas plants that don't need as much water and have short vegetative cycle. Foods as soybeans and millheto, now grown in India and China as maize's substitute, could be produced in the Northeast.
- Reducing the costs of transporting goods as well as offering work to others in the region through an industrialization policy to benefit local raw materials.
- Creating access to water accumulated in great dams, mires, and perforation of wells. There should be additional construction of underground watering holes, to be used by the currently excluded population.

Policy needs to be enforced to reduce the excessive number of cattle grazing in pastures. This causes serious damage to grass and ground as well as the burning of grass that results in deforestation from using vegetation for fuel.

It is not possible to eliminate a natural phenomenon. Droughts will continue to exist. But it is possible to coexist with the problem. The Northeast is viable. Its bigger problem is that of inhabitants considering themselves victims and not taking action to change things. Positive ecological changes have to be made similar to those made in the desert of Negev in Israel, where the local population has obtained a good standard of living.

The implied solution includes the adoption of one official policy for the region. It should be a plan that respects the population of the Northeast by creating conditions of access to the land and work and adopting a management plan for the agencies involved in buying and selling.

Conclusion

Northeastern Brazil has unique characteristics. One characteristic that is the principal cause of poverty and resulting hunger is drought. Water resources are a big problem for the Northeast. The typical climate has only one period of rain per year, but that doesn't mean the inexistence of water. Water infiltrates and accumulates in the subsoil. With subsoil water, irrigation could be a way for producers to become independent of climatic conditions. However, we then face the lack of technology. The waste of water is the biggest problem in using outdated methods. The best solution for this issue is using dripping irrigation that is cheap and does not require much technology.

Northeastern Brazil has the lowest level of food security within the country. Zero Hunger is an excellent project to give basic infrastructure and dignity to families and small farmers. What is needed in this project is the establishment of priorities for people to stop considering themselves victims and for them to start working to overcome this problem. The transportation of water in the São Francisco River is a great project to brighten up drought effects. But it is impracticable because of many problems. And if it were practicable, it wouldn't help those who need it most.

The Northeast is viable. Its characteristics if associated with a good infrastructure and irrigation, give this area great conditions to produce and compete in prices and quality. If a correct policy were adopted by the government, the severe climate would not be the problem but part of the solution. If all running projects were unified and all efforts were headed in the right direction, the Northeast would not only become more viable, it would be a place of great opportunities. Though we cannot change the climate condition, we can manage it.

Works Cited

- Anderson, Kerby. "Poverty, Population, and Priorities."
World Hunger. <<http://www.leaderu.com/orgs/probe/docs/hunger.html>>
(last updated August 5, 2003; accessed September 3, 2006)
- Andrade, Manoel Correia de, A seca: realidade e mito, Recife: ASA Pernambuco, (1985). 81.
- IFAD, Rural poverty in Brazil.
<<http://www.ruralpovertyportal.org/english/regions/americas/bra/index.htm>>,
(5 August 2006).
- Suassuna, João, Vontade política é a verdadeira seca do nordeste, Gazeta do Nordeste
(19 May, 1998).
- Arca Universal, Projeto Nordeste,
<<http://www.arcauniversal.com/projetonordeste/interna.jsp?codcanal=1008>>,
(27 September 2006).
- IBGE, Segurança Alimentar,
<<http://www.ibge.gov.br/home/estatistica/populacao/trabalhoerendimento/pnad2004/suplalimentar2004/comentario.pdf>>, (2004).
- Galvão, Ana Catarina, Seca, tragédia surrealista previsível, Rumos do Desenvolvimento, nº3
(August 1998).
- Governo Federal, Fome Zero, Mapa de Indicadores Sociais
<https://www15.bb.com.br/site/fz/mapa/DocPrefeitos.htm> (accessed September 1, 2006)