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## Understand Trends in Global Nutrition: The Paradox of Hunger and Obesity Malnutrition and Hunger in Niger

There are many countries all over the world with malnourished and starving people; there are also many with overweight, over nourished, and obese people. One of the worst for malnourishment and starvation is Niger. Everyday, too many children are dying from lack of food and nutrients; 122 children die at birth for every 1,000 born. 262 out of 1,000 children die before they reach the age of five. Mothers have no hope for their newborn's lives. 14 percent of children suffer from acute malnutrition (acute malnutrition is the result of sudden weight loss due to starvation and disease) and 15 percent are severely underweight; about 800,000 children suffer from malnutrition with 160,000 in serious condition. This crisis spreads out over 3,815 villages. Today, food supplies in Niger run out three months after the harvest is completed. Granaries stand empty and in disrepair; they are usually in better shape than the owner's house. Hunger has become a chronic problem for Niger, with over one third of its population in crisis.

Niger is a republic in western Africa. It is one of the biggest countries in the world covering 489,200 square miles. Algeria and Libya border the country on the north while Nigeria and Benin border it on the south. Chad covers the country's east border and Burkina, Faso, and Mali its west. The country can be divided into three regions, the northern, central, and southern. The northern zone (covering over half of the country) lies within the Sahara. This desert area consists of plateaus and mountains and has very little vegetation. The central zone, or Sahel, is lightly wooded and semiarid. The southern zone is fertile and is benefited with adequate rainfall and periodic overflow from the Niger River, the only river in the country. Niger's climate is generally hot and dry. Little to no rain falls in the north, while (in good years) up to 32 inches can fall in the south. Vegetation in the south consists of extensive grasslands and a variety of trees, while the northern region has little to no vegetation. Large deposits of uranium ore are found in the north, as well as coal, tin, gold, phosphate, iron ore, and copper.

In addition to the little rain in the north and sometimes in the south, there are environmental problems. Poor land management and overgrazing of the land has resulted in soil erosion and desertification. This in turn has reduced the productivity of the country's farmland. Burning wood and other traditional fuels accounts for 80 percent of the country's energy consumption (MSN Encarta 2005), and this need for wood is leading to mass deforestation in Niger's central and southern regions. Niger's poorly developed utility and health infrastructure has led to the spread of infectious diseases. A little over half of Niger's population has access to safe water and less than 20 percent is serviced by adequate sewage systems. However, Niger's government has made some effort to protect the environment. It has ratified treaties protecting biodiversity, endangered species, wetlands, and the ozone layer.

Niger has a population of around 12,000,000. 90 percent of the population lives near the southern border. The majority of Niger's population is black, mostly Hausa and Djerma. The majority of people in Niger work as subsistence farmers in the southern region. The remaining quarter of the population are mostly Tuareg and Fulani and follow a nomadic lifestyle. The people of Niger are not expected to live more than 42 years and many infants die at birth. The infant mortality rate is about 122 deaths per 1,000 live births. This is most likely caused by weak mothers or unsafe birthing methods.

A typical family in Niger consists of about twelve people. Mothers generally have about seven children; grandparents and cousins sometimes live with them too. A family of this size needs more food than they actually have. They typically don't have the money to buy the food they need, and lately (with the drought and locust invasion), the crops have been very sparse, producing only enough food for about three months. Many people in Niger are small farmers because they typically do not have the higher levels (sometimes even lower levels) of education. Net primary school enrollment rates in West Africa are among the lowest in the world at just 57 percent on average. Only about 17.6 percent of the population can read and write and 93 percent of women in Niger are illiterate. These small farmers, in a good year, earn enough income to buy about seven months worth of food. However, in years like 2004, they can afford only about three months or less. Nearly 25 percent of the country's population has no money at all for food when the crops fail.

The level of malnutrition in Niger is reaching critical proportions. Emergency-care centers run by organizations like Doctors Without Borders are overflowing with young children, many of them infants. Some of these infants may be eighteen months old but weigh only as much as a healthy three-month old. On average, 262 out of every 1,000 children die before they reach the age of five. According to MSNBC, 160,000 children are currently suffering from serious malnutrition and the lives of 32,000 are at immediate risk. These children are usually so malnourished that their stomachs can no longer hold most foods. Even more children and adults are impacted by the food shortage. About 3.3 million people, including about 800,000 young children, are urgently in need of food.

Food production in Niger has never been very good, but in the past year or so it has been even worse. The main crop in Niger is a wheat-like crop called millet that only thrives if enough rain falls in August. Families use this crop for nearly everything: daily meals, currency, payment for social events, and more. Small farmers also raise typical livestock including cattle, sheep, goats, camels, donkeys, horses, and chickens. However, drought in Niger is killing the farmer's livestock and crops; many farms also lack irrigation systems and some lack access to water at all. Other crops produced in Niger include cowpeas, cotton, peanuts, sorghum, tapioca, and rice. Other foods, machinery, vehicles, gasoline, and various cereals are all imported into Niger while uranium, livestock, cowpeas, and onions are all exported. Food is currently very scarce; it is also extremely expensive. Last year, a 100 kg bag of millet cost around \$16 to \$24. This year, the same thing costs more than \$44. It doesn't help when the people of Niger have little money to begin with; Niger is the second poorest country in the world. 63 percent of the country's population is below the poverty line; one in two people are living on one dollar a day (WFP). Usually, food prices begin to fall from September to December before rising again. Last year, however, food prices did not fall, and in January, they skyrocketed. Prices rose because production of food is rapidly decreasing from drought and a locust invasion. Also, there is no change in food production from subsistence to cash crops; there is barely enough food to keep many people alive.

Food production, for many people in Niger, is everything. They depend on it for survival. Millet is used in almost every meal of the day and is the main source of income for the majority of the population. Because the food production is way down this year, many families do not have enough money to buy the food they need for their children or the adults. Since food production is down, it is also creating economic problems for the country as well. Niger's economy is centered on subsistence crops, livestock, and the uranium deposits. Constant drought cycles, continuous population growth, and a drop in demand for uranium have undercut the economy. Many international organizations donate money every year to help free up some of

Niger's debt so the country's government can put money into education, health care, and programs geared at poverty reduction.

This year's food crisis comes from a long stream of bad luck. It started in August of 2004 when the rainfall comes to an early stop. Locusts then ate any crops that survived the poor rains. In October, food prices started to rise and food becomes scarce. Then in November of 2004, livestock conditions begin to deteriorate. People are struggling to survive. Official figures estimate that the grain production for 2004 is 15 percent less than the average for grain production. Niger usually requires three million metric tons of grain, but this year they have only 223,448 metric tons (WFP). Also in November, Niger's government issues an urgent appeal for 78,100 metric tons of emergency food aid. In December, the government finalizes its "National Emergency Plan" which included many international organizations. Niger is put on the US-based Famine Early Warning System (FEWS NET) under countries "requiring urgent attention." They were later upgraded to emergency status. In January of 2005, the government's emergency food reserves are dwindling. In April, the WFP and Helen Keller International do a nutritional survey with shocking results. The survey finds that more than 350,000 children under five are suffering from malnutrition. It also showed that Niger has a significant on-going malnutrition problem (WFP). In May of 2005, the UN launched a "Flash appeal" for Niger, requesting \$16.1 million, which later increased to \$18.3 million. The government also raised taxes on many consumer goods, including staples like milk and flour. In June, the granaries are empty and grain prices are outrageous. The market price for livestock has plummeted to almost nothing, making it almost impossible for small farmers to sell their herds and buy food for their families. In July of 2005, news of the food crisis in Niger is spread around the world to people like us.

Because of the above events, the food crisis in Niger is extremely critical. A very small percentage of the needed food is being produced and/or purchased. Because the food production is down, many people's incomes are lower, which means that they cannot buy or produce the food they need. This leads to malnutrition and starvation. Most of the available land in Niger is used for farming, which is creating a diminished biodiversity (variety of plants and animals). For many families, most of their land goes to farmland; however, one small patch is saved for a family burial ground. Because of the recent events, this patch holds more babies and children than old men and women. Most food is grown in rural areas, leaving rural families at a disadvantage, especially the rural poor. For most, there is no other source of income so many men move to urban areas to try and find jobs. Women then become disadvantaged because they need to stay home and take care of their many children without any help from the men in the families. Even with the men there, many women do not have time to properly take care of their children. They usually spend their time fetching water, grinding grain, cooking, and farming. This leaves little time for preparing proper food for infants and young children. What would happen if the men were not there to help?

In the same way that people from Midwestern United States mark time by the severity of their winters, people from Niger mark time by the severity of certain year's food crises. There is a national expression in Niger that "years that end in four are always bad" (Scharnberg). This refers to numerous famines including the ones in 1984 and 2004. These are years when there were terrible harvests; there are always malnourished, hungry people in Niger but "years that end in four" tend to be worse. These trends are measured in malnutrition rate, death rate of children and adults, amount of crop harvested, poverty levels, amount of rainfall, and many more. Currently, conditions in Niger are getting worse, but there is hope for improvement. More rain has fallen this year, and hope for a good harvest is present.

Improvement of food production would depend a lot on the weather and rainfall. However, if it did improve, more food would be available to the people of Niger and many people would have a better income. With the availability of more food, nutrition would be easier to attain for children and many adults. Increased food production would benefit everyone in the country but would provide more benefit for the women, children, and small, rural farmers of Niger.

There are many ways international organizations and government can help improve the situation in Niger. Many are already donating food and money to the people and government of Niger, but to prevent more famines in the future, more steps must be taken to prevent it. I believe that different organizations and governments will have to work together to even have a hope of solving this problem. They should work together to educate the farmers of Niger on modern ways of farming and irrigation. Rotating different crops through the same field or even trying to grow different crops may aid in food production and land preservation. Many farmers do not have modern farm equipment because they cannot afford it. Therefore, most agricultural labor is done manually. If different organizations could work together to donate these to villages, it may help improve the situation drastically. Organizations may also have to help put irrigation systems in by donating time and money, which many do not want to do. Finding a way to provide water to the livestock would help keep them alive through severe droughts. Also, educating people about proper nutrition and health could improve the situation. Showing mothers proper ways of taking care of their children could keep many children alive past the age of five. The government should work on their transportation system from urban to rural areas. Many towns and villages are almost unreachable because of the poor transportation system. This creates problems in getting food and water to them in case of an emergency. Neighboring countries' governments and Niger's government could work together to provide support and resources for their people.

Niger has a long road ahead of them; it is a country facing many problems. It is primarily a desert country with limited areas for life and limited resources. Niger is one of the biggest countries in the world, but also one of the poorest. Many of its citizens are uneducated and illiterate. There are many serious health problems and risks for its citizens; the people of Niger have a very high risk of obtaining infectious diseases, many through food and water. Diarrhea, hepatitis A, and typhoid fever are some of the most prevalent. As well as educational and health problems, there is also environmental problems. Many years, Niger does not get the rain it needs in order to produce an adequate amount of food. By using some of the recommendations I listed above, I believe that the quality of life in Niger can improve. It will take a lot of hard work from a lot of people over a long period of time, but I believe it can be accomplished.

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