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Panama Factor 11: Malnutrition

### **Panama: Replenishing the Earth**

Jingle bells, mistletoe and Christmas cheers! You walk into your living room and smell the sweet aroma of baked sugar cookies and spot the twinkling blue lights above the warm fireplace. You snatch the oversized puffy chair in the corner and notice your seven-year-old cousin swiping sweets from the mountain of vibrantly decorated desserts across the room. As he shoves handfuls of crumbling sweets into his pocket, you hear the crisp tone of your mother yelling from the dining room, “Children, it’s time for dinner.” You walk into the dining room and are astounded by the amount of food piled on the dark oak table. Piles upon piles of drizzled ham, gooey cheese potatoes injected with butter, steaming rolls, and so much more. You sit in a chair next to your brother and all you can think about is sinking your teeth into the warm wondrous food, but then you start to wonder. What are other people doing this Christmas Eve? Well, of course, there are other families doing exactly what you are doing, but what about 795 million people that don’t get food daily ([wfp](#), Web). They don’t get the drizzled ham or the gooey cheese potatoes. They are lucky to get a sandwich or an apple, which most people take for granted. They are starving every day, including the 232,000 Panamanians.

#### 1. Panama Living

Panama is located in between Costa Rica and Columbia. It mostly has steep mountains, but they turn into rolling plains closer to the coast ([Central Intelligence Agency](#), Web). Since Panama is only 620 miles from the equator, they have a tropical maritime climate, meaning they have a hot, humid rainy season from May to January and a short dry season. Panama is made up of 3,657,024 citizens; with sixty five percent is mestizo ([Encyclopedia](#), Web). A typical family is four people, but the extremely poor family is composed of six people ([afsusa](#), Web). The typical diet for Panamanians is made up of of rice, beans, and corn. If you are part of the upper class, it is common to eat fish, such as corvina or sea bass, and drink beer or rum ([afsusa](#), Web). Many of their foods have the same names as Mexican foods but have a special twist to them. For example, tortillas in Panama are a half inch thicker and commonly used with eggs and cheese for breakfast.

Panama’s education is free for children ages six to fifteen. First children have seven years of primary school and elementary school then three years of middle school. Typically school runs from April to December and from 8:00 am to 3:00 pm ([Augustin, Bryon](#) 94-95). The four main subjects taught are science, math, a foreign language, and social studies. Also the students can get involved in many extracurricular activities, anywhere from languages to sports. With the current system, they have a ninety five percent literacy rate ([Augustin, Bryon](#) 94-95). After finishing middle school, students go to college. The most popular colleges are University of Panama and University of Santa Maria la Antigua. They are both located in Panama City, but the University of Panama is a public school while the University of Santa Maria la Antigua is a private school. Even though Panamanians don’t have to pay for school besides college, healthcare can be a big issue for them. The two institutions for health care are the Ministry of Health (MINSa) and the Social Security Fund (CSS), which are funded by the government

([World Health Organization](#). Web). Ninety percent of the population has access to either institution; the other ten percent is mostly made up of rural people that live too far away from a major city. The Ministry of Health runs medical examinations for the poor, helps construct hospitals, and conducts hygiene inspections while the Social Security Fund runs the hospitals, emergency medical attention, and retirement pension. The biggest issue with health care in Panama is the huge gap between urban and rural healthcare. Most people do have access to healthcare, but it isn't great. All private clinics are modern and well kept, but they are very expensive and people can't afford them. The public clinics are rundown and sometimes don't have enough supplies to handle all of the clients.

## 2. Typical Farm

Farming is an essential component for any country because it is a great source for food and money. In Panama thirty percent of the land is used to grow crops, and fifty percent of what they export is crops. Two-thirds of the population in rural area works two to fifteen hectares (4.94- 37.05 acres) while one-third of the population works thirty-six hectares (88.92 acres). The major products are bananas, cocoa beans, coffee, coconuts, timber, beef, chicken, shrimp, corn, potatoes, rice, soybeans, and sugarcane ([Agriculture in Panama](#). Web). In the year 2014 Panama grew and exported \$364 million worth of vegetable products. Which includes \$243 million in bananas, \$27.7 million in coffee beans, and \$33.1 million in melons ([OEC](#). Web). Also that same year Panama raised and exported \$343 million worth of animal products. Includes \$91.5 million in fresh fish, \$88.6 million in crustaceans, and \$4.04 million in eggs ([OEC](#). Web).

In Panama a major issue in agriculture is their soil is composed of clay; as a result, they have to have different agricultural practices than other countries. The most common practice to improve the fertilization of the soil is called slash and burn. Slash and burn, commonly used by native Indians and adopted by Panamanians. This technique involves cutting down trees, bushes, and weeds and burning them in a selected spot. Then the farmer would grow their crops on the plot of land for two years. After that they would move onto another plot of land and repeat the process. They would let the first plot of land rest for ten years before they'd plant again on it. This practice has slowed down because the forests in Panama were being used for this and almost disappeared.

## 3. Major Barriers

There are many barriers that are preventing Panama from having enough food to sustain its country. Within agriculture there are two major barriers: the biggest one being they have clay soil and the other barrier is that the only fertile land is next to the rivers. Clay soil is such an issue because it is compacted in the ground. Normal dirt has air pockets that allow the water to move around and disperse itself easily. With clay soil, it has no air pockets so water can't flow through the ground and get to the roots ([Nebraskaccess](#). Web). Essentially when you water plants in clay soil, the water will sit on top of the soil or just a few inches below and drown the plant. The other issue is the only fertile land is right next to the rivers. This is because the river is a great place for the plants to get nutrients, and a natural run off so the water that is being put on the plants can run off. The problem with having fields right next to the river is chemicals seep into the water. Many farmers use pesticides on the crops and the water collects the chemical. When people drink the river water, it causes many illnesses including cancer, respiratory issues, and birth defects which can all come from the chemicals being put on the crops ([Truthout](#). Web).

Just like in the United States, you need more education to get a higher paying job. Common sense right? Well, that's how it is in Panama. Education is a great way to get your way out of poverty. The issue is college costs a lot and it is hard for a person in poverty to pay for it. Also with the minimum wage of \$2.31 and working forty-five hours a week, you only make \$416 a month ([Encyclopedia](#). Web). Lastly, because malnutrition is common in Panama so are brain disorders. The people in poverty are most commonly the malnourished, causing them to have a higher chance with brain disorders, which in turn makes it harder for them to go through school or get a decent job. The last and biggest issue that Panama has is access to food markets and adequate nutrition. Panama has three big market chains, including Riba Smith, El Rey, and Super 99. These markets have all the basic needs including the staple foods: rice, beans, and corn. The reason why Panama has an issue with malnutrition is the price of food has risen so much. Over the past five years prices on basic food has risen twenty-four percent ([Panama Post](#). Web). To stop this President Juan Carlos needs to put a regulation on food prices.

#### 4. Malnutrition In Panama

Malnutrition has many effects on household incomes. With the price of food being very high, even for just the staple foods, and wages being so low, \$2.31 an hour, it's hard for families in poverty to buy food ([Encyclopedia](#). Web). Many illnesses can come from malnutrition for example stunted growth, depression, and a form of dementia called Wernicke-Korsakoff syndrome ([HealthLine](#). Web). So if you are in poverty and your child suffers from malnutrition, not only do you have to deal with trying to pay for food but also paying for doctor visits and medication. One in every four children suffer from some degree of malnutrition. It is estimated that one quarter of children ages six to nine have chronic malnutrition, and 35,000 mothers suffer from some degree of malnutrition ([forusa](#). Web). Even though the national annual salary is \$244, in most places like eastern Chiriqui and Bocas del toro the annual salary is \$62-\$81 ([forusa](#). Web). Most houses in these areas have dirt floors, bad sanitary services, and a lack of drinking water. Samuel Turgman, president of the National Nutrition Service Association says, "pre-school age children, from birth to 3 years of age, who suffer from severe malnutrition, will have a deficit of brain cells on the order of 20%, which means that their ability to learn will be severely limited." The only program that has been developed is a law that children in school will get eight ounces of fresh milk and a cookie ([Humanium](#). Web). This gives them 10 grams of protein and 600 calories. That is 25% of their daily nutrition requirement. The issue of malnutrition is increasing; over 32% of the population is in some degree of malnutrition in 2008 ([Humanium](#). Web).

If malnutrition is improved in Panama the population will grow. This will be good because then the economy will grow because more people mean more jobs will be filled. More citizens need to have the jobs skills to be employed because according to National Competivness Center there is a shortage of workers ([Central America Data](#). Web). Just in the logistics area Panama needs 35,000 workers, 28,000 in construction, and 4,113 in tourism ([Central America Data](#). Web) So omit by improving malnutrition, there will be less mental and physical disorders in the society. This will then help fill the jobs that are either more physically demanding or more mentally demanding. There are many issues though that could influence malnutrition. If the population grows, then the cities will have to expand and take up more land, which in turn decreases the amount of land they can use for agriculture. This then affects the amount of food to put into stores and the amount of food they can export. Another issue that could influence malnutrition is air pollution. If the cities get to polluted, then people will start moving to rural areas, which in turn takes away land for agriculture.

There are many factors besides just agriculture helping the issue of malnutrition grow. For example, Panama has been in a drought for the last four years. So not only do they have land that is horrible to farm in, but they aren't getting the amount of water they need. The drought they are going through right now is called El Nino, and it has said to be the driest drought in history ([Gaurdian](#). Web).

### 5. Composting

Malnutrition has affected so many lives that it's time to make a change. The solution that could help decrease malnutrition in Panama is composting. Composting is defined as a mixture of decaying organic substances that are used for fertilizing soil ([Dictionary](#). Web). This would help the clay soil by not only fertilizing the clay but also creating air gaps to allow water to flow through. In turn this will create healthier plants and more plants to harvest. For compost you need a mixture of green and brown materials, exactly two thirds brown to one third green. Brown materials include branches, stems, peels, dried leaves, and sawdust. Animal feces can be included but not cat and dogs. Green materials are typically substances you throw away like fruit peels, coffee grounds and grass clippings([GardeningKnowHow](#). Web). Farmers that start to use composting will have to mix the compost in the ground to the depth of three inches. Then let it sit for two weeks before planting seeds.

For composting I propose that we create a business, but it will be supported by the communities. I suggest this idea because it is already being used in Cuba. When Cuba went through a phase called Periodo Especial, the country lost up to 60% of their cattle and the average farmer would lose up to 30 pounds of crop ([Biocycle](#). Web). Once Cuba started composting, productivity in the feilds increased greatly. In Panama all of the organic materials will be donated by the communities. I would like to split the country into five major sections and within each section there will be a factory that all the compost will go to. In each section there will be two cities that have bins stationed for the citizens to drop off the "trash". Each city will have five drop off locations. Each factory will be supplied with tractors, compost turners, screeners, and packaging equipment([Wordpress](#). Web). I want the organic materials to be supplied by the citizens, because then it can be their decision if they want to make their lives better. It will become their responsibility to make Panama a better place. If the organic materials are not being supplied, the bags of compost will have to be bought by the farmers. Though in the future of the company, it would be best for it to be given to the farmers without payment. The estimated cost would be \$121 million to start the business. The cost is split out like this: \$200,000 for tractors ([fleetowner](#). Web), \$21,100 for bins ([homeadvisor](#). Web), \$15,000 for compost turners, \$1,000 for screens ([lawnsite](#). Web), 120 million for buildings ([insidepanamarealestate](#). Web) , and one thousand dollars for extra expenses. For the funding there are many ways to help with that. For example, one of the biggest countries Panama exchanges with is the United States. If the United States would be willing to help pay for the business to start, then Panama could lower the prices on food for the United States. Also Costa Rica has an issue with getting rid of "trash". Panama could make a deal with Costa Rica saying they will take the organic materials if Costa Rica helps pay for the company.

The government, the communities, and many organizations would greatly be appreciated in helping with this project. The government can place laws on donating compost each month and increase the amount of food the children get at school. The communities can help by setting up recycling areas and recruit citizens to work in the factories and on farms. Also organizations like lawn care services can donate lawn

clippings instead of throwing them away. The average citizen may feel like they can't do much to help, but they can. They can help by saving fruit and vegetable scraps, paper items, and organic materials. Even if the citizen only recycles a little bit, it can go a long way to helping save the country. Local projects like PAC, Programa de Alimentacion Complementaria, could also benefit from a project like this. PAC helps feed pregnant women and lactating women and their children([stri.si](http://stri.si). Web). With more food PAC can help more women. Another local project that would benefit from this project would be Nutre-Hogar. This program helps malnourished children in rural areas get more food.

All in all, composting would benefit so many lives. When the citizens donate the organic materials they can feel good because they know they just helped save 3.6 million people. Not many people can say they put in the time to save that many people. So the next time you sit down at a family meal or in front of the drizzling ham for Christmas dinner, remember that not many people are as lucky as you are. Not many people can say that they are full after a meal. Sit back and think because making the step toward curing malnutrition is by starting to realize that not everyone is like you. Once that is realized, then people will start making the effort to not only understanding but helping projects like this one. Have you figured out that people need help? If so, are you ready to save 3.6 million people today?

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