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Haiti, Malnutrition

### **Haiti: Agricultural Advancement to Minimize Malnutrition**

Haiti is a poverty-stricken country located in Central America, and is home to millions of malnourished civilians. The population of Haiti is approximately 11.2 million people, and it is estimated that over one-third of the population lacks the resources to provide a sufficient amount of nutritious food (“Haiti.” *Encyclopædia Britannica*). Due to this food insecurity, micronutrient deficiencies are becoming tragically widespread in Haitian children. Numerous issues contribute to food insecurity including frequent natural disasters and a high poverty rate. Additionally, the current lack of financial investment in agriculture largely contributes to the issue of malnutrition. In order to enable recovery for Haiti’s disheartening condition, these concerns must be addressed. Foreign aid and the implementation of systems to improve the agricultural economy are vital for the nutrient security and health of developing children in Haiti.

As previously stated, Haiti is home to approximately 11.2 million people. About 48% of the population lives in urban communities, while the other 52% live in rural areas (“Living Conditions”). The World Bank reports that “the richest 20% of its population holds 64% of its wealth, while the poorest 20% hold hardly 1%” (“Living Conditions”). These economic circumstances make Haiti the most unequal country in Central America regarding wealth. Extreme poverty is defined by the United Nations as “a condition characterized by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information”(“PAWSSD Chapter”). According to The World Bank, around 24% of Haitians live in extreme poverty, and this percentage has not seen a decline in over twelve years. These shocking statistics imply arduous lifestyles and brutal conditions for millions of people in Haiti.

The cycle of generational poverty contributes significantly to malnutrition. The World Health Organization (WHO) describes malnutrition as “deficiencies, excesses or imbalances in a person’s intake of energy and nutrients” (“Malnutrition.” *World Health Organization*). The WHO also specifies that one form of malnutrition is ‘undernutrition’ which occurs when a person does not consume the nutrients necessary to support growth or a properly functioning body. Undernutrition, especially in children, commonly results in dietary disease. A few common symptoms in children that experience undernutrition are stunting, wasting, and micronutrient deficiencies. The first, stunting, is identified in children when their height is significantly lower than the average of other children their age. Wasting occurs when a child’s weight is extremely low for their height, resulting in a low body mass index. Finally, micronutrient deficiencies are also common which are the result of a child's underconsumption of important vitamins and minerals. These symptoms are just a few of many that occur due to undernutrition. Because of the severity of malnutrition in Haiti, children are extremely vulnerable to these diseases.

One solution to contribute to assisting malnourished children in Haiti is foreign aid. While an argument suggesting that the United States should reduce its foreign aid efforts has been posed, it is evident that improving living conditions in Haiti will reduce the migration rate into the United States. Therefore, providing aid to Haiti will allow the United States to more effectively focus on domestic issues. Additionally, the acutely terminal suffering that many Haitians are experiencing must not be ignored by an ethical government. Tens of thousands of children are suffering severely from malnutrition, as a direct result of extreme poverty. Devastatingly, the rate of malnourished children is increasing rapidly. In fact, this year 217,000 Haitian children are projected to suffer from acute malnutrition which is vastly greater than the estimated 134,000 children that did last year (“Haiti: Funding”). The United Nations Children's Fund (UNICEF) Regional Director for Latin America and the Caribbean, Jean Gough, said that she is “saddened to see so many children suffering from malnutrition” and added, “Some will not recover unless they receive treatment in time” (“Haiti: Funding”). Because healthcare in Haiti-especially for those in extreme poverty-is largely inaccessible, it is likely that many of those children will never receive treatment. Due to the striking number of children experiencing malnutrition, the rate of those with dietary disease symptoms such as stunting, wasting, and being underweight is also extremely high. The Global Hunger Index reported that “Haiti’s child stunting rate [is] at 21.9 percent, which is considered high in terms of its public health significance”(“A Closer Look”). They also state that in Haiti “just 11 percent of children ages 6 to 23 months received a minimum acceptable diet”(“A Closer Look”). Nutrition is a necessary element to a child's growth and survival, but the needs of a large percentage of Haitian children are not being met. This is a staggering issue that must become common knowledge across the American public, so that it may be addressed immediately.

USAID has advocated for foreign aid efforts by partnering with numerous organizations to take action in fighting against malnutrition. Reports from USAID state that their office of “Food for Peace (FFP) partners with the UN World Food Program (WFP) to provide cash transfers for food to approximately 190,000 food-insecure individuals in” rural Haitian cities (“Food Assistance”). Additionally, “FFP partners with Catholic Relief Services to provide conditional cash transfers to approximately 26,500 food-insecure individuals in the South Department of Haiti”(“Food Assistance”). USAID has collaborated with a Haitian mobile company, Digicel, as well who has provided the system through which the funds are being distributed. Cash transfers in this regional system are provided electronically, in the form of voucher cards. Beneficiaries are given a card and pin number to access the virtual currency. USAID has implemented a targeting and selection system for food voucher beneficiaries in order to identify how to optimally triage funds. The targeting system accounts for various metrics of social and economic criteria including income, land owned, livestock, marital status, along with other disadvantaged circumstances (“U.S. Agency for International”). Benefits of these electronic cash transfers include greater access to nutritional foods, the development of an organized mobile financial service in the region, and improvements within the local market.

Not only does USAID offer this mobile funding model, but they do so “in exchange for participation in income-generating and nutrition education” to provide resources for Haitians to advocate for their own health and wellbeing (“Food Assistance”). Although USAID exhibits promising steps toward improving the issue of malnutrition and dietary diseases in Haiti, foreign aid programs alone cannot sustainably

support the entire impoverished population. To permanently improve conditions in Haiti, specific efforts using extensive analysis must be made.

Thorough analysis suggests that a prominent and often overlooked factor that heavily impacts impoverished Haitian civilians and contributes to the high rate of malnutrition is low agricultural investment. The International Fund for Agricultural Investment (IFAD) elaborates on the issue and discusses its current severity. They report that “agriculture’s contribution to the economy has been declining since the 1980s,” and explain that its “productivity is severely constrained by a number of factors” (“Haiti.” *IFAD*). While the agricultural economy is suffering, the majority of impoverished civilians that are employed currently work on farms. The agricultural industry is the primary source of income for families of children commonly suffering from malnutrition, however it is facing severe issues in productivity.

As stated by IFAD, agricultural “productivity is severely constrained by a number of factors” (“Haiti.” *IFAD*). One factor is small farmers’ limited access to appropriate technology and irrigation materials. However, the most detrimental factor is frequent natural disasters. Flooding and hurricanes in Haiti often cause mass devastation, making farming conditions highly difficult and unpredictable. Although this issue may appear impossible to address, the Inter-American Development Bank has developed strategies that will target agricultural advancements in an effort to improve conditions for the impoverished Haitian population.

The Inter-American Development Bank (IDB) is leading the movement of improving agricultural investment. Once its visions are carried out, Haiti’s agricultural economy will be revolutionized. The primary goals of The IDB’s efforts are “to develop [Haiti’s] agricultural and agroforestry sectors, improve productivity and boost food security” with their “\$55 million grant” (“IDB to Invest”). To reach these goals, The IDB plans to focus on boosting agricultural productivity by implementing sustainable resources and technologies. Sustainability is a key element of this plan because of Haiti’s unpredictable climate. The World Bank Group states that over “the past 30 years, Haiti has been hit by six hurricanes” and that in these, the majority “of this small island nation is affected” (“World Bank Climate”). As mentioned, natural disasters have historically devastated Haiti’s agricultural economy, so it is vital for implemented programs to possess resilience to adverse climate conditions. The IDB has not released a statement regarding measures that will be taken to ensure their efforts are resilient, however, there are promising practices that would be wise to implement.

In October of 2016, Hurricane Matthew devastated food production in Haiti. The United Nations Food and Agriculture Organization (FAO) issued a report stating that “local food production and livelihoods [were] “almost destroyed” in the south-west departments of Grand’Anse and Sud, where Hurricane Matthew first made landfall” (“Damages to Agricultural”). The 2016 natural disaster also perpetuated the effects of a drought in the region that had “reduced food production and access to fresh water” over the previous year (“Damages to Agricultural”). The aftermath resulted in an estimated 1.4 million Haitians in

need of humanitarian assistance (“Damages to Agricultural”). The hurricane and drought were not isolated events in Haiti’s climate history, as they are the two most commonly occurring natural disasters and have proven to be particularly destructive in the southwestern region of the country. Certain agricultural practices would be highly effective in reducing the destruction of these specific incidences and preventing the need for humanitarian aid of this extent in the future. To achieve optimal results through the agricultural interventions, certain areas of Haiti should be targeted.

The use of extensive research conducted by the FAO regarding farming practices that are resistant to natural disasters would be highly impactful in minimizing the destruction of agriculture during natural disasters. In the FAO’s multi-country study and analysis of disaster-resilient farming, numerous solutions targeting a wide variety of climate conditions across the world were presented. Multiple strategies on the document prove to be optimal for combatting the climate concerns and frequent natural disasters which occur in Haiti. One notable practice discovered by the FAO, is cultivating on slopes with barriers to protect crops from hurricane damage (“Disaster Risk Reduction”). This strategy would likely prove effective for Haiti specifically, due to their vulnerability to hurricanes. Another disaster resilient farming practice that Haiti would benefit significantly from is the production of early maturing cassava plant species, as well as flood-resistant rice varieties (“Disaster Risk Reduction”). Currently, subsistence crops such like rice and cassava are a primary focus of many Haitian farmers. However, the species of the crops grown are generally the ‘local’ varieties-rather than the optimal varieties. In order to become more resilient to floods during the wet season, Haitian farmers should adopt the early maturing, flood resistant species of these crops. One region in which the FAO’s intervention techniques would be effective is the Aribonte Region of Haiti. Aribonte Valley is the primary location of rice production in Haiti, and the species currently being cultivated has been grown in the region for over 200 years (“Geographic Indications”). While many farmers in the Aribonte Valley are familiar with the “swamp” rice variety, the FAO states that by growing early maturing rice varieties farmers could greatly increase their production (“Disaster Risk Reduction”). In order to educate Haitian agronomists in this practice, peer-to-peer learning must be utilized. If the FAO sends representatives to present the advantages and teach farmers how to produce this variety, locals who receive the education would then have the opportunity to share their knowledge with others in the region. Through this model of peer-to-peer learning, the introduction of early maturing rice varieties promises vast improvements for Haiti’s economy and individual families in the Aribonte Valley

The La Hotte Biosphere Reserve is one area in which the implementation of the agricultural practices would be particularly effective. This reserve encompasses the south-western region of Haiti and includes six mountainous regions. It is also “home to more than 850,000 inhabitants, whose main economic activities are farming [and] agroforestry”(“La Hotte Biosphere”). By cultivating on the inland faces of slopes in this region and utilizing water-resistant steel barriers to enhance the protection of the naturally protective landscape, agriculture would be effectively protected from the effects of future hurricanes. Construction Design and Management Architecture (CDMG) states that to prevent erosion of barriers serving as protection from storms COR-TEN steel should be utilized (“Team, CDMG”). This steel is coated in zinc, allowing its resistance to elements. By advising farmers to cultivate inland and introducing

protective barriers, agronomists in the La Hotte Biosphere Reserve would greatly reduce their risk of losing their land and crops in the inevitable event of a future Hurricane.

The practices discovered by the FAO are highly innovative, yet realistic to implement. Director of the FAO's Emergency and Resilience Division, Dominique Burgeon, claims that "disaster risk reduction (DRR) efforts on the farm make good economic sense: that investing in DRR early can save many dollars that would otherwise be spent on post-disaster rehabilitation" ("Disaster Resilient' Farming"). Over the past two decades, tens of billions of dollars have been spent on post-disaster rehabilitation efforts in Haiti. By investing early in these practices, this immense rehabilitation expense could be drastically reduced. Additionally, after performing "multi-year trials on over 900 farms in 10 different countries, the FAO stated that many of the low-cost farming innovations are within easy reach of poor farmers. And, they are much more than buffers against disasters" ("Disaster Resilient' Farming"). The United Nations agricultural agency's "disaster resilient" farming practices would be revolutionary for Haiti's economy and have an extremely positive impact on its impoverished population.

The battle to end malnutrition in Haiti has been inadequately addressed for decades. While basic foreign aid has provided temporary support and rehabilitation, external funding alone does not suffice as the primary solution. Hundreds of thousands of children will suffer from acute malnutrition this year in Haiti, making it a necessary issue to address. Natural disasters that severely hinder agriculture production, often lead to mass devastation and continued struggle for the impoverished population. The International Development Bank's vision of improving Haiti's agricultural investment while increasing resistance to adverse climate conditions is a phenomenal ideal that will lead to vast improvement. A highly effective use of the IDB's \$55 million dollar grant would be the implementation of 'disaster-resilient' farming techniques that have proven to be successful by the United Nations' Food and Agriculture Organization. The use of these practices in Haiti would be revolutionary for the agricultural economy. This revolution would result in massive improvements in malnutrition and reduction in cases of dietary disease for the large impoverished population.

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