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Laos, Factor 11: Malnutrition.

Laos: Decreasing Rates of Micronutrient-Based Deficiencies Through Greater Access to Nutritious Food

Recent historical coverage of Southeast Asian countries often mention the intensity of the struggles experienced by the local populations. The establishment of the Khmer Rouge triggered a genocide in Cambodia (Fletcher). The Vietnam War marked an internal clash between northern and southern political factions concerning the spread of communism (Spector). The Economist website has stated that Thailand has been largely ruled by its military since 1932. The majority of these countries became subjected to Japanese control shortly before World War II, and were major battlegrounds on the Pacific Front. To summarize, political unrest was common in many Asiatic nations during the 20th century. Although many of these conflicts have subsided, there are a myriad of issues opposing the civil restoration of Southeast Asia. A proportionally large number of these setbacks relate to food consumption, and have particularly been affecting the populace of a territory positioned in the center of Asia's southern geographical range: The Lao People's Democratic Republic, commonly referred to as "Laos." The intensity of this country's food security issues may start causing problems in its emerging economic prosperity, although the underlying causes aren't shared by many other countries internationally.

The Lao People's Democratic Republic is a landlocked country, a status shared by no other nation in Asia's Southeast region. The territory is bordered by countries such as Thailand, Burma, China, and Vietnam, and possesses an area of approximately 236,800 square kilometers, according to infoplease.com. The typical size of a family in Laos is 5.9 persons, translating to roughly five or six people inhabiting a household, according to statistics provided by the World Health Organization. Many of these family members consist of children and adolescents, as the median age in the Lao population is 22, as shown by a demographics website known as "indexmundi.com." In addition, the average diet of a Lao family consists almost entirely of glutinous rice. As a matter of fact, 80% of Lao cropland is actually dedicated to the cultivation and growth of sticky rice, which statistically shows that Lao dependency on rice production is far greater than those of neighboring countries, such as Vietnam (Roo Sisters). Bitter greens (kaffir limes, lemongrass, and basil) and fruits (mango, pineapple) are commonly eaten along with white rice, and there is virtually no presence of processed or packaged foods in Lao cuisine. Much of the protein in the diet originates from chicken, beef, or pork, which are abundantly found in a salad known known as larb, which happens to be the national dish of Laos. As a result, there is almost no presence of food completely lacking in nutritional value (Roo Sisters).

Despite the apparent health benefits of this diet, the country's healthcare system is rather low in quality. According to indexmundi.com, there are only 0.19 physicians for every 1,000 people in the Laotian populations, many of these doctors have received minimal medical education, and there are very few clinics in a typical rural village. The same source provides statistics showing that the quality of Lao education isn't substantially higher. The total population has a 72.7% literacy rate, with 82.5% of the male demographic displaying literacy. Statistically, only 63.5% of female demographic is proficient in literacy as well. Furthermore, the federal government spends only 2.8% of its GDP expenditures on education, meaning that 146 other countries spend more money on curricular learning internationally.

It is very true that the rural conditions of Laos complicates the developmental and physical health of families living in the area as access to health care is limited. However, the lack of population density also allows for many families to access farms and agricultural sites. According to the Encyclopedia of Nations, the average farming family possesses 1.62 hectares of land available for agrarian purposes. In detail, 27% of Laotian civilians possess over two hectares of land, and 36% of the populace have less than one hectare of land available for farming. The specific categorization of crops grown in the area are affected by the presence of wet tropical forests, allowing for reliance on wetlands for farming. Due to Laos' extreme reliance on its staple dish, rice grains are the most common crop cultivated by farmers. However, there is a large variety of potential food sources grown to accompany the presence of the rice plants. For example, bananas, tamarinds, and other arboreal fruits are often present in Lao farms, along with tobacco--based crops. Livestock, such as pigs and chickens, are raised for consumption-related reasons as well. The presence of this livestock is beneficial when eaten, as it is a major source of protein, as also stated by the Encyclopedia of Nations.

Even though there is widespread civilian access to farmlands, there is one factor serving as a major barrier between Lao families and complete stability, especially in regards to economics and physical health. This factor involves the malnutrition of the Lao population. Although the majority of Lao people do not struggle with consumption or lack thereof, it is the national dependency on sticky rice that causes an imbalance of nutritional gain. Since 80% of a Lao's calorie intake is the aforementioned grain, based on information provided on the UNICEF website, the agricultural productivity is excessively centered on one certain crop, and thus hinders the viability of a Lao family's primary source of sustenance. Although most of the cuisine in Laos is highly nutritional, higher consumption of certain food products should correlate with higher intake of nutrients associated with the dish.

In the Lao People's Democratic Republic, malnutrition persists in severity. The UNICEF website demonstrates the frightening statistics of this problem, and the causes behind it. The population's tendency to rely on reliance on glutinous rice, possibly in tandem with the lack of sufficient national medical care, has caused over 31% of children under the age of five in Laos to be underweight. In addition, 48% of the juvenile population experiences stunted growth. Hindrances in the physical growth of the nation's child population will arise as a result. How will the population of Laos be affected in the future due to the negative effects of nutrient deficiency? Will these shocking numbers hurt the economy as these kids begin to get jobs, or begin farming crops? A solution to malnutrition needs to be implemented before we even discover the consequences of these statistics, for improving complications involving malnutrition would help implement a Lao workforce consisting of a healthy population, and would minimize the current developmental damage inflicted upon malnourished children.

Fortunately, environmental issues currently play a minimal role in the presence of malnourishment in Laos, as there is a nationwide lack of urbanization and pollution, in addition to a large scale presence of jungles and sustainable land. The Encyclopedia of Nations provides absolute proof behind this statement. About 51% of Laos' GDP is attributed to farm work, and almost 80% of the Lao population is engaged in farming of some sort. There is a slight bit of urbanization. The Encyclopedia of Nations also stated that the traditionally rural population of Laos has fallen by 6% between 2005 and 2010. This does show that Laos is currently experiencing higher rates of urbanization, but the complications of this occurrence is not as hazardous as the general population's high dependence on rice. As a matter of fact, this urbanization may actually be a factor of increasingly positive trends shown in Laos' economy. For example, Laos is

supposed to achieve middle income in five years, by 2020 (Prabang). The positive effects of this economic growth actually increases the stakes of Laos' struggle with nutrition. These children need to be healthy and educated before they enter the workforce, which will most likely happen several years after Laos has become a financially stable country (Prabang).

Although introducing diverse sources of nutrients into Lao cuisine would help improve the status of regional malnutrition, the sudden lack of focus of cuisine involving rice may cause some controversy in the cultural attitudes of the populace. Given statistics detailing the nutritional consumption of the average Lao citizen, commanding a Lao household to start eating more nutritious foods might imply that there should be a drastic decrease in his daily rice consumption. With these factors in mind, it is best to encourage the consumption of more nutrients while still allowing for the Lao people to preserve the presence of their staple dish, in addition to providing more nutritional education to the Lao people about their cuisine. The best way to implement this improvement would be to encourage the consumption of black glutinous rice. Although it is a slightly different strain from the variety consumed by Lao civilians, black glutinous rice has a plethora of nutrients, is completely unprocessed and gets its dark color from its preserved bran exterior. It should allow for a compromise between Lao cultural values and efficiently combating malnutrition. One-third of a cup of black glutinous rice contains 120% of the required daily value of manganese, as opposed to 23% found in a full cup of the white variety. The same amount of unrefined rice also possesses 20% of the suggested phosphorous and magnesium intake, and 8% of the suggested amount intake of selenium (Lewis). One cup of white sticky rice only contains twice as much selenium (14%), while there is only enough magnesium and phosphorous to satisfy approximately 1-2% of the daily suggested intake, as provided by a site known as "nutritiondata.com." Black glutinous rice possesses antioxidants, such as anthocyanin, which help aid in preventing heart disease and obesity, and can treat symptoms of malnutrition-related illnesses such as diabetes (Lewis). There is practically no change in calories between the two rice strains, as well. One cup of the unprocessed variety possesses 160 calories, as opposed to a cup of white rice, which contains 169 calories. If the average Lao citizen were to consume strains of black glutinous rice, they would gain the nutritional benefits of white glutinous rice in fewer servings, and may allow for less emphasis on rice as the sole Lao staple dish. Last, but not least, black rice is reported to be very tasty, with an overall nutty flavor (Lewis).

There are already many established collective efforts that involve themselves with Lao food security, such as the Bokeo Food Security Project. The Bokeo Food Security Project helps improve the functioning of government services, for medical, educational, and agricultural purposes. Should this program be successful in their efforts the Lao government can be coerced into placing a greater emphasis on their medical system, potentially pouring greater funding into the education of, and implementing more clinics and hospitals in rural Lao villages. The program has already been successful in assisting the construction of several medical institutions in the country, and has educated over 2,400 Lao villagers on community development, crop production, and livestock husbandry. Should the participants in the Bokeo food project be educated on the benefits of black glutinous rice, the cultural attitudes of the Lao people towards rice consumption would hopefully change due to greater informational exposure on the topic of malnutrition. This education may be assisted further by the presence of physicians, which should increase in number due to the construction of these new hospitals.

While the Bokeo Food Security Project has attempted to implement a lasting influence on Lao security, its webpage acknowledges its failure to target the female and socioeconomically low demographics of Laos in its exploits. As a result, should smaller food security projects be unsuccessful in their endeavors

to initiate better food security in Laos, large--scale organizations such as UNICEF (United Nations International Children's Emergency Fund) are also expressing interest in the dietary affairs of Laos as a country. Unlike the Bokeo Food Security Project, UNICEF is international in scale, and is headed by the United Nations, meaning that it possesses an array of resources to address issues relating to juvenile advocacy. As a matter of fact, UNICEF itself reports on the exploits of Lao physicians attempting to treat malnourished children, and forms partnerships with the European Union and the Lao government in an attempt to educate the Lao people about the causes of malnutrition. The Health Poverty Action, organizations that help UNICEF, teach Lao citizens about proper hygiene and nutrition, especially pregnant women whose children may suffer from starvation, which may cover for the Bokeo Food Security Project's inability to acknowledge female authority in agriculture. Perhaps some factual education could help combat restricting cultural attitudes about diet, because the survival of a nation may be more important than the strict preservation of tradition. If pregnant women and families with children were educated on the limitations of a virtually rice--based diet, then they may be able to expose their young ones to a greater variety of foods, or to the existence of black glutinous rice, before these starving victims attain any bias regarding the cultural attitudes of their cuisine. With UNICEF--based efforts in Laos benefitting the lives of many rural villagers, the implementation of my malnutrition-related solution may be able to control or improve the devastation of the ailing child population in Laos. Finally, the pre-existing ease in preventing malnutrition may accelerate the economic prosperity in Laos, according to Scale Up Nutrition Movement. For every \$1 spent on addressing malnutrition-related issues in the country, there may be room for the country to gross \$30 due to its effects on the population. In other words, the Lao population and workforce has room to grow by 31% in the next five years through this funding, and the gross national product may improve by 11% (Merrick), which allows for greater contributions to the improvement of the Lao economy. This means that the financial resources needed to tackle malnutrition across the country may be available, given that the Lao government spends 2.4% of its Gross Domestic Product on tackling malnutrition.

Ultimately, malnutrition is a very severe issue plaguing the Democratic People's Republic of Laos, but it can be addressed and controlled with substantial effort involving the implementation of healthier rice varieties, and the presence of greater health care available to the average Lao citizen. There are several noticeable signs that black rice could be successfully introduced as a Lao staple. In neighboring Thailand, the grain is served as a popular snack item. Although not immediately bordering Laos, the Southeast Asian nation of Indonesia is known for serving black rice pudding. Noticeably, the staple food in all of these countries has been rice. So, why not attempt to help Laos follow this pattern and impose a greater culinary presence of black glutinous rice as a legitimate staple food? It offers a compromise between Lao cultural values and the importance of their malnutrition-related conflict. Nutritional stability can be achieved through ample education of the local populace, while expressing some conformity to their societal values regarding cuisine. Along with the hypothetical provision of basic health improvements to the country, the economic benefits Laos could subsequently experience are too interesting to ignore. The disastrous rates of malnutrition in the country's populace is a world hunger issue that is waiting to be addressed and solved, and with the recent improvements to Laos' economy, the most appropriate time to aid in its growth is now.

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