Cambodia: Fighting Malnutrition

Hunger is a problem that many individuals do not even think about. A simple look in the refrigerator for something or helping oneself to a sandwich is not an option in many countries. Instead of helping themselves to a sandwich, people have to either grow their own foods or raise the livestock for their meats. For example, an individual would have to grow their own grains and then use the grains to make the bread for the sandwich. Next they would have to grow lettuce and tomato plants and harvest them at the given time. The person would have to raise the livestock during a long period of time until it’s ready to be slaughtered. Then the meat would be able to go on the sandwich. Finally, think about the cheese, one would have to raise dairy cows, first milk the cows then add cultures to the milk to create the cheese. Imagine how long it takes for just one individual to make a sandwich. Now, think about Southeast Asia, Cambodia to be exact. “Asia is the continent with the hungriest people - two thirds of the total population. The percentage in southern Asia has fallen in recent years but in western Asia it has increased slightly.” ("Hunger Statistics, WFP") According to “The State of Food Insecurity in the World 2015,” Cambodia contains 2.2 million of undernourished or malnourished citizens out of the 15.14 million total. That means that 14.2 percent of the population in Cambodia are not receiving the amount of nutrition they need to live a productive life. When an individual is malnourished, their body has difficulty doing normal things such as growing and resisting disease. Their ability to learn as well as engage in physical activity can decrease because they are not receiving energy from foods. A child’s first couple months of their life are crucial for human growth and mental development. Looking at statistics, 40 percent of children under five are acutely malnourished, in other words stunted. According to the UN’s Standing Committee on Nutrition, “Malnutrition is the largest single contributor to disease in the world. Malnourished rates are measured using BMI- body mass index to check malnutrition. On average a BMI higher than 30 is obese, 25-29.9 is overweight, 18.5-24.9 is normal, 17-18.4 is chronic energy deficiency mild, 16-16.9 is moderate, and fewer than 16 is severe.” ("The Use of Epidemiological Tools in Conflict-affected populations") There are some ways to measure malnutrition. “An anthropometric measure frequently used during emergencies is the measurement of a child's upper arm—the MUAC, or Middle Upper Arm Circumference. Anything less than 12.0 cm indicates a child's life is in danger from acute malnutrition.” (“Hunger, Diagnosing Malnutrition”) The results of malnutrition can be severe, often times leaving adults and children in depression. These individuals can be depressed about the way the look or act due to lack of essential nutrients which includes carbohydrates, protein, fat, vitamins, minerals and water.

Cambodian families typically have a full household. “In rural areas, extended families, including grandparents, aunts, uncles and cousins often live together for financial reasons. The family is likely to be economically independent, owning enough land and a home to be self-sufficient.” (Linda Wetzel, Jennifer Houng, and James Heng) Since there are no nursing homes in Cambodia it is up to the children to look after their elderly parents. There is a greater proportion of children and adults living in rural areas than urban areas, due to the fact that approximately 90 percent live in rural areas. Cambodian families have three meals daily: breakfast, lunch, and dinner. Families’ meals consist of rice as the base of the meal since rice is Cambodia’s staple product. A meal may also consist of vegetable soup, meat or fish, and raw or cooked vegetables. The average family farm in Cambodia is one hectare which is equal to 10,000 square meters. These farmers make between $100.00-200.00 American dollars per year per hectare. “Mostly farmers grow rice. However, they also may grow maize, cassava, and sweet potatoes. Rice is grown on about 85 percent of the total area in Cambodia.” (“CAMBODIA: Future Growth Rate of Rice Production Uncertain”) A family may raise livestock for additional income such as cattle, buffalo, pigs, and poultry. “The rice growing ecosystem consists of rain-fed lowland rice, which is flat bounded rice
fields that are almost fully depended on rainfall or surface runoff. This system accounts for 86 percent of the total annual rice cropping. Next, there is deepwater or floating rice. This is when varieties of rice are grown in flooded conditions of water for at least a month. In addition to the two, is rainfed upland rice and dry season irrigated rice. Rainfed upland rice is grown in rainfed fields which are prepared and seeded when dry, similar to maize. Finally dry season irrigated rice is irrigated with water supplied from highland reservoirs.” (“Agricultural Production”) “The rainfed lowlands of Cambodia are bunded fields that are almost completely dependent on local rainfall and runoff for water supply. Rainfed lowland rice is cultivated in all provinces. The largest concentration is around Tonle Sap, the Tonle-Basaac River, and the Mekong River. The rainfed uplands are unbunded fields that depend entirely on rainfall. They are generally found scattered on rolling lands, some of which are mountainous forested areas. They form only a small proportion of the total rice land in Cambodia. Deepwater rice is grown in low-lying areas and depressions where maximum water depth can reach more than 3 m. The floodwaters originate from Tonle Sap and the Mekong and Tonle-Basaac rivers and their tributaries.” (“Cambodia Rice Environments”) These different types of rice productions are used throughout Cambodia depending on the season and region.

Education for children and health care to all Cambodians is a struggle. Children in Cambodia have difficulties getting an education. “They may either take classes in the mornings or afternoon, however many of the students have to travel quite sometime to get to school. In addition teachers barely make enough money on a monthly basis so they charge students unofficial fees in which the student’s families are not often able to pay. Because of this only 26 percent start lower secondary school and just 9 percent start upper secondary school.” (“Poverty in Cambodia, and Why We All Do What We Do”) Only about half of Cambodia’s population has access to health services. The Cambodian government does not offer to extend affordable health care insurance to farmers, therefore many farmers do not have insurance. A current problem that affects the agricultural advancement in Cambodia are the landmines. A landmine is an explosive device laid on or just under the surface of the ground. That means whenever someone walks on a landmine prone territory, there is a possibility that the person could set one off from just taking a step. In result, the landmine would severely injure the victim or in a worse case scenario, kill them. Landmines still stand in Cambodia from when the United States dropped half a million tons of bombs in the 1960’s and 1970’s during the Cambodian Civil War. In addition, “Khmer Rouge soldiers had laid mines almost everywhere along the western border, to prevent their victims from fleeing. Khmer Rouge was a brutal, murderous revolutionary group intent on revolutionizing Cambodian society.” (Sandro Krkljes) After the war, efforts were created by the Cambodian government to remove the millions of landmines in Cambodia, however, to remove the landmines became an immense task. “These weapons that can cost less than US$3 each to manufacture can cost up to US$1,000 each to clear. Trained workers have to crawl their way along, probing the soil ahead, inch by inch. One person can clear only 20 to 50 square metres per day.” ("The Legacy of Land-mines.") Since removing the mines is such a costly task, most mines stay in tact until activated. “Nearly 80 percent of the rural population of Cambodia is dependent on agricultural activities, but the lethal threat of landmines keeps communities economically stunted. Landmines effects on agriculture include the inability to farm the native’s land or travel to trade with neighboring countries.” (“The Truth About Cambodian Landmines | MAG America”) Because of landmines and the harm they do to the natives, it makes it hard to farm the land. The land may be fertile, however, Cambodians cannot settle and grow crops due the presence of the mines and the effects the mines could do to the people and crops. If the landmines are not removed, the risk of threat increases. Farmers could attempt to plant crops and a landmine could go off and the whole field could be destroyed. If the crops get destroyed the farmer has no way to make a profit, in result no money to support their family. Landmines also pose a threat to the livestock. Livestock are oblivious to mines so if an animal walks on one it may die. The owner of the livestock would lose the money spent on the animal and become in debt. There are some nonprofit organizations such as “GlobalGiving” to remove landmines in Cambodia.
Malnutrition is a severe problem in Cambodia, for the majority of the population is suffering from some form of malnourishment. “Only 40 percent of Cambodian farmers are able to generate a marketable surplus of rice, the rest of the rice is mainly for self-sufficiency.” (“CAMBODIA: Future Growth Rate of Rice Production Uncertain”) Therefore, the other 60 percent are not making any money from exportation, so they will not be able to buy other foods for survival. This means that the rice the farmers do grow is used for self-sufficiency; in other words they do not grow enough to sell or export to other countries. In order to grow more, rice farmers would need more land to field the rice. The urban poor are more affected by malnutrition than the rural poor because urban people do not have a farm of rice paddies. Out of all generations, however, children suffer greatly from malnutrition: “When children are malnourished, the bones cannot develop and grow, therefore the bones contract and the child will stay short. The result is stunting, which is a growth failure and is not reversible after a certain age. If children are malnourished in their youth, the often result are long term effects such as stunting and weak immune system.” (“World Food Programme”) These children will fall behind in school due to lack of concentration because of nutritional deficiency which is already difficult for children who are not receiving enough nutrients, becomes more difficult for malnourished kids. Malnourished boys and girls become slowed down and do not function how children with a sufficient amount of nutrients would. Malnutrition reduces their abilities for problem solving skills, social skills, and language development. “Continual or severe malnutrition limits brain growth and may result in mental retardation. People who are mentally retarded have abnormal levels of cognitive and mental functioning. This affects their ability to learn and master the tasks of daily living. Children who don’t have normal motor skills or are slow to meet developmental milestones may have some level of retardation. Less severe cases, however, may not be observed until they are in school and are unable to take on academic activities.” (Rachel Morgan) If children were able to receive a substantial amount of nutrition, the literacy rates in Cambodia might improve considering that children would be able to concentrate. On the other hand, adults who become malnourished in their adulthood can make a full recovery if treated seeing that they are already fully grown/developed. It’s especially important to fix this problem with the children because the children are the future. If they are not well nourished, the children could potentially die as shown in mortality statistics. “According to the 2000 Cambodia Demographic and Health Survey (CDHS), for every 1,000 babies born in Cambodia, 95 die in their first year, leading to one of the highest infant mortality rates in Southeast Asia. Sadly, more than a third of these deaths occur in the first month of life. Another 33 children out of 1,000 die before their fifth birthdays. All together, 1 in 8 Cambodian children die between birth and age 5.” (“Children in Cambodia Face High Mortality Rate”) To decrease child mortality rates, a variety of actions can be planned. For instance, children should be breastfed right after birth to receive the essential nutrients in their first crucial days. Similarly, children also need to be fed nutritional foods daily and have an access to safe, clean water. Recent studies are showing antibiotics combined with ready-to-use therapeutic foods can reduce malnutrition rates in children. According to Dr. Joe Barber Jr. studies’, “Children in the amoxicillin (RR, 1.55; 95% CI, 1.07 - 2.24; P = .02) and cefdinir (RR, 1.80; 95% CI, 1.22 - 2.64; P = .003) groups were less likely to die. Overall, 88.3% of the children enrolled in the study recovered from severe acute malnutrition,” the authors write. There was no statistical advantage to amoxicillin over cefdinir for either recovery ($P = .22$) or death ($P = .53$).” Antibiotics can increase a child’s height and weight. “Overall, we found that antibiotic treatment had a positive effect on both height and weight with increases of 0.04 cm/month for height and by 23.8 g/month for weight,” says Amee Manges, a professor in the School of Population and Public Health at the University of British Columbia.” (Cynthia Lee-McGill) Using antibiotics for a reduction in malnutrition could be the beginning of a child’s life. Doctors are not sure why these antibiotics are helping the way they are, for testing has been shown that antibiotics worked. According to Steve Baragona’s news post “Indi Trehan, a pediatrician at Washington University, acknowledges it's not really clear why the antibiotics are having the effect they are. He says that’s what he plans to spend the next several years studying.” Since antibiotics are still fairly new in the field of malnutrition, more testing must be done before medication can be used to reduce malnutrition rates.
Some Cambodian women have not been breastfeeding their newborns; the result became a cause of malnutrition because the baby was not receiving the essential nutrients needed for development. A reason for this would be the woman’s inability to produce an adequate amount of milk to breastfeed, or some women choose not to breastfeed. “Many women feel that breastfeeding is very difficult because of competing school, job, and household responsibilities.” (Linda Wetzel, Jennifer Houng, and James Heng) Instead caretakers would give the babies water right after birth which was more often than not, contaminated. Now, beliefs have changed and women breastfeed. “The new ‘normal’ in Cambodia is to breastfeed babies within the first hour after birth and to give them nothing but breast milk for the first six months. This way babies are not exposed to dirty water and receive the perfect balance of nutrition from breast milk. Caretakers no longer give water and using infant formula is not common.” (Cori Parks) If mothers continue to breastfeed straight after childbirth for six months, then infant mortality due to malnutrition could be substantially reduced because babies would be getting the nutrients needed from breast milk. “Breast milk provides newborns with the best combination of antibodies, vitamins, proteins other nutrients for the baby's health and cognitive and physical development, according to the American Academy of Pediatrics. The APA recommends exclusively breastfeeding a newborn for at least the first six months of life, followed by at least another six months of combining breast milk with other sources of nutrition, such as formula.” (Remy Melina) On the other hand, when breastfeeding, mothers must be healthy and eat right to produce a nutritious and healthy breast milk. Breastfeeding uses a lot of energy and nutrients so it is important for mothers to consume the nutrients needed such as proteins, calcium, and iron. Breastfeeding is a good alternative instead of formula for the mothers in Cambodia because it is free of charge. Women should be educated about the benefits of breastfeeding, so they become persuaded to breastfeed their own children. It gives vital nutrients to children directly after birth which gives the baby strength.

The Cambodian government is highly dependent on foreign assistance. “Between 30 and 40 percent of the central government’s budget depends on donor aid.” (“U.S. Relations With Cambodia”) Cambodia receives contributions from several countries such as the USA, China, and Australia. Private organizations such as Action Against Hunger or UNICEF also provide funding to Cambodia. “In 2014, U.S. foreign assistance for programs in health, education, governance, economic growth, and demining of unexploded ordnance totaled over $74.5 million.” (“U.S. Relations With Cambodia”) The United States is one of the main contributors of Cambodia’s financial aid. “Cambodia obtained, on average, development assistance of around US$600 million a year during the last five years, of which about 10 percent is provided by non-governmental organizations (NGOs). The main sector destinations included government and administration, health, transportation, education, and rural development.” (Ek Chanboreth and Sok Hach) With foreign aid, Cambodia has been able to make a little improvement. “Cambodia has made considerable progress in raising living standards but remains one of the poorest countries in East Asia. About 20 percent of the population lives in poverty and a similar proportion sit just above the poverty line. While Cambodia has made important strides towards achieving its Millennium Development Goals, huge challenges remain. The Cambodia Agricultural Value Chain program (CAVAC) is increasing the value of rice-based agricultural production and smallholder income in three provinces – Kampong Thom, Kampong and Takeo. CAVAC is constructing and rehabilitating irrigation schemes and providing farmers with access to agricultural inputs such as fertilizers, pesticides and training in modern farming techniques.” (“Development assistance in Cambodia”) Because Cambodia has had a high amount of foreign assistance, they have not been able to become self-sufficient in helping their citizens with problems such as malnutrition. If Cambodian officials could earmark a percentage of the funding the country receives, for health, education, or transportation than workers could move into higher jobs to create an increase in salary.
Even though the malnourishment rates are high, rates decreased from what that used to be. According to “Cambodia’s Feed the Future Country Fact Sheet”, “Cambodia has transformed in remarkable ways in recent years. The country is at peace after decades of conflict. Strong economic growth since the mid-1990s has helped reduce the proportion of people living in poverty. Fertility, child mortality and child malnutrition rates have also declined. Notably, the prevalence of stunting among children under 5 years old dropped from 50 percent in 2000 to 40 percent in 2010.” Eradicating malnutrition would help the community. Resolving malnutrition rates would mean families would have a supply of food in their households and enough food to maintain a healthy life. If families were not malnourished, income rates could increase because the individuals’ would be receiving the sufficient amount of nutrients to perform well at their jobs and make more money.

In decades ahead, if malnutrition is still at its peak, other major issues could be a factor. If the climate soars into higher temperatures because of the depleting ozone layer, then plants may not be able to survive those extreme temperatures. If the plants do not survive, people will not have real food sources, therefore malnutrition rates will increase. If the population continues to grow by substantial numbers, the demand for food will increase. Because the people will overtake the land, there will be less land for farming. Since there will be less land for farming, then there will not be enough food grown to provide for the growing population. In result, citizens will not be receiving a sufficient amount of food which will lead to malnutrition. If urbanization occurs in Cambodia, the rural lands will be overthrown. Families would not be able to grow their crops such as the rice in their fields because their fields would be replaced with buildings. In addition if urbanization occurred, the families on the farms would be displaced! Moreover, as the result of the other two issues, there will be less food for the population. Another major issue is pollution which could greatly affect the decades ahead. If pollution continues to occur, pollutants will contaminate the water in which goes into the plants. When the water gets contaminated and still goes into the plant, the plant will die due to harsh chemicals. Finally all plants need water to grow, so if water became scarce plants would die off because plants need water to develop. The environment is extremely important to maintain a healthy ecosystem and people.

To improve agricultural productivity, farmers in Cambodia must produce a surplus of food in their country that would be available to the public, not just for exportation. “The pressures of a fast-growing population contribute to poverty. Because of a lack of education and skills training, people have inadequate employment opportunities and low capabilities. They are insecure, excluded and vulnerable. They have limited access to natural resources. Poor health, lack of education, poor infrastructure and low productivity lead to deeper poverty. The cycle of poverty, ill health and high healthcare expenditure cripples poor Cambodian families economically.” (“Rural Poverty in Cambodia”) Overall if Cambodians created a higher surplus of rice, their economic stability would increase. Since more rice would be grown, more could be sold in the country or out as exports, thus resulting in more profit.

To address malnutrition in Cambodia, more people in the world need to become aware of the problem there. Not many people are aware of the high malnourishment statistics in this Asian country. The Millennium Development Goals were developed by the leaders across the world in September 2000. These leaders set out a series of time-bound targets with a deadline of 2015. Goal number four was to reduce child mortality and this relates with malnutrition. If child mortality was reduced, this means they would be well nourished instead of malnourished. To do as so, there are several organizations in Cambodia as of now fighting malnutrition. “Feeding Dreams Cambodia is a grassroots Community School providing free education, school meals and community support to over 800 poor children and families living in Siem Reap's slums. We strive to keep families united, fight poverty, illiteracy and malnutrition, and help grow tomorrow's community leaders.” (“Feeding Dreams Cambodia”) This program uses public donations to provide meals of nutritious rice soup of herbs, vegetables, iodized salt
and chicken/beef for malnourished children. Action Against Hunger is another organization that closely works with government agencies. Action Against Hunger uses $0.92 of every donated dollar on program activities, meaning it is going straight the people in Cambodia, since Cambodia is one of the designated relief countries. “This organization evaluate nutritional needs to assess the root causes of a malnutrition outbreak, we collect baseline data on key nutritional indicators like local capacities and resources, cultural practices, infrastructure, and geography. These nutrition surveys are essential for mounting an effective, customized response.” (“Nutrition ACF- International”)

In the final analysis, Cambodia is one country where an individual cannot just open their refrigerator to simply grab a piece of food. There are many factors of malnutrition to be considered such as the level of malnutrition, if it is mild, moderate, or severe. These levels indicate the severity of the condition along with the symptoms that go along with malnutrition. If other major issues were to occur decades on such as climate change, population growth, water scarcity, urbanization, and pollution, they would greatly affect malnutrition, most would result in no more crops for families. Landmines are another issue which is slowing down the process of farming in rural areas. Currently there are several organization working with Cambodia so that the country reduce their malnutrition rates. To end malnutrition in Cambodia, it would take a global effort and a long time, too. There would have to be more financial aid to fund the projects such as biofortification. Biofortification is the idea of breeding crops to increase their nutritional value either through conventional selective breeding or genetic engineering. The 21st century has had much advancement in technology. Practically anything can be found online. Therefore, to get the public’s attention, use of social media could create funding for malnourished citizens in Cambodia. Individuals who are big on social media could use it as an advantage to educate the public on Cambodian issues. Simply tweeting a hyperlink to a website to donate money or posting a photo on Instagram to show the reality of life in Cambodia could grasp the attention of the public. If more attention was paid on Cambodia, the country could improve as a whole. Economic development would dramatically increase since more citizens would be able to work now that malnourishment rates would be down. Likewise, if malnutrition was no longer the case that means individuals would be getting a substantial amount of nutrients, or a food source such as rice, subsequently, leading to the rice market increasing. This leads right in to the fact that the environment could be sustained because there would be more rice fields in Cambodia. This would benefit the farmers, meaning they could make a decent profit if rice yields increased. There are some other possible solutions to treating malnourished citizens of Cambodia. Biofortification is a fairly new method scientists are using to genetically modify foods. “It is the process of breeding food crops that are rich in micronutrients, such as vitamin A, zinc, and iron. These crops “biofortify” themselves by loading higher levels of minerals and vitamins in their seeds and roots while they are growing. When eaten, they can provide essential micronutrients to improve nutrition and public health.” (“FAQ about Biofortification | HarvestPlus”) Using biofortification methods in Cambodia, individuals there would be able to get a substantial amount of nutrients in their food without having to worry about eating enough food just to get the correct amount of nutrients. If malnourished rates decreased, that means there would be more healthy citizens in Cambodia, resulting in a rise in employment. This is because citizens would be able to work to their greatest potential since the malnourishment would not be slowing them down. Envision how different the life of a citizen in Cambodia would be like if they didn’t have to constantly think about where their next meal was coming from or how that individual would obtain the meal.
Works Cited


"Poverty in Cambodia, and Why We All Do What We Do." *Poverty in Cambodia, and Why We All Do What We Do :: Helping You to Help - ConCERT Cambodia :: Connecting Communities Environment & Responsible Tourism*. ConCERT, n.d. Web. 22 July 2015.


