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Bhutan, Malnutrition

Bhutan: Malnutrition in the Children of Bhutan

An ancient kingdom rests today in the practically mystic land of Asia. Rolling hills and tree covered mountains encompass the land, with historical buildings placed to compliment this stunning landscape. This kingdom's people remain traditional and seemingly pure. These people are fierce protectors of their customs, which allows for the strong ethical presence in this country that gives it the feel of perfection. The common colorful religious festivals give this place life and make it unique, and contribute to its distinguishable character. This kingdom is Bhutan. Although it has many amazing features, it has one major flaw: malnourished children.

The country of Bhutan is a kingdom located in south-central Asia (*Bhutan- World Bank*). This kingdom is Buddhist, with 75% of its 787,941 people practicing that religion (*Countries and Their Cultures & Bhutan Population 2022 and Demographics, Maps, Graph*). Bhutan's place on the Himalayas eastern edge gives it a truly beautiful landscape (*Bhutan- World Bank*). With its famous monasteries and gorgeous countryside, many may think this place perfect (*Countries and Their Cultures*). The low crime rates, outlawed hunting and fishing, and traditional culture make this country very safe, almost like paradise (*Active Adventures*). However, not all is as perfect as it seems in this kingdom. Many children suffer from stunting, as a result of malnutrition (*UNICEF*).

What is stunting? Stunting is what happens to malnourished children. It is where a child is shorter than the average height for other children their age in their area. Stunting is much more than being vertically challenged however. It puts at risk the health of these children and their own future children. Stunting can cause a child to have a poor immune system, which can make them more susceptible to illness, infections, and diseases. Stunting can also lead to poor brain function and organ development. All of these affects could prove fatal if not taken care of, and the last thing wanted is the death of the future of Bhutan (*Stunting: What It Is and What It Means*).

All of Bhutan was considered rural, then the first urban settlements were developed in the 1960s. Today, 57.68% of Bhutan's people reside in rural areas (*Encyclopædia Britannica & Statista*). Many of the sparse villages have no access to markets or supermarkets, other than what is right in their own village. Their limited access to food can become an issue because of their frequent natural disasters. These can wipe out crops and homes, leading to a higher poverty rate. An estimated 12% of the population is considered poor. Poverty is overwhelming in remote villages, where high rates of malnutrition are common (Jewayni). Cattle farming and agriculture is the main occupation in Bhutan, with individuals in the business making 269,000 BTN (\$3,624.24 US dollars) yearly (*The Complete Guide*).

13.45% of the land is cultivated, with the average farm having just three acres of land (*Bhutan- Agricultural Land (% Of Land Area) and Multiple Cropping in Bhutanese Agriculture*). Three acres of crops could be difficult to replace, especially in the humid and subtropical climate (*Bhutan, Tourism Council of "Climate & Weather"*). Farms are most likely family owned and operated, and since average Bhutan families consist of 4.6 persons per household, recovering from natural disasters could be even more difficult still (*Survey Coverage and Household Background Characteristics*). Financially recovering with just yourself to take care of is one thing, if you're responsible for three or more other people recovering can become much more difficult. On the bright side, however, reconstruction would be less expensive, considering that many traditional homes are made of timber and rammed earth (*Kamakhya Bhutan*). Living in a country that is abundant in trees, timber is easy and rather inexpensive to come by.

Some of the natural disasters that commonly destroy crops in Bhutan include earthquakes, flooding, wildfire, landslides, Glacial Lake Outbursts Floods (GLOFs) and windstorms. All of these natural disasters are made much more dangerous simply because of Bhutan's landscape. The large amount of trees and mountainous land make all of these more dangerous than they would be simply in a place like Indiana, where it's very flat land with not a large amount of trees. Earthquakes are damaging because they can cause crops to be uprooted and die as the earth crumbles. Earthquakes can also lead to landslides, which also don't have to be caused by specifically earthquakes. Landslides are very dangerous in Bhutan because the sliding matter will gain much more speed as it comes down the mountains, and it will also take many trees with it since there are so many. These landslides which could start out simply as a couple of large rocks could turn into rushing matter the size of the field it could destroy. Wildfires are also more dangerous in Bhutan, because of the large forests that cover most of the area. There's more to burn, and because there's not a lot of access to rural areas, the fires would be harder to put out so they could destroy more. Mostly all of these disasters are made more dangerous simply because the large amount of trees could be moved and cause destruction in the process (*Vulnerability | Climate Change Knowledge Portal*).

Average families in Bhutan include 4.6 persons (*Survey Coverage and Household Background Characteristics*). To get married, a certificate from the Court of Law is required. Marriages can be arranged, but dowry is not practiced. Bhutan's culture doesn't discriminate women in any way, other than considering them a lower status than men. But girls receive the same educational and work opportunities. Men and women are free to converse without restrictions. Women and men often work side by side in the workforce, but teaching and nursing positions are often filled by mostly women. Typically, Bhutanese people are monogamous. Polygamy is legal, with the wife's consent, but polyandry (multiple husbands to one wife) has been abolished. Once a man and woman are married, *Countries and Their Cultures* says, "A bride does not necessarily move into her husband's household, as is common throughout much of the Indian subcontinent. The new husband may reside with his wife's family if their need for labor warrants it. Alternatively, the new couple may set up their own household on their own plot of land." (*Countries and Their Cultures*). However, if all does not work out in marriage, divorce is legal. The man or woman seeking to be separated must compensate their spouse. (*Countries and Their Cultures*).

Since Bhutan's cuisine is affected greatly by their neighboring countries, it only makes sense that typical Bhutanese diets consist of pork, beef, chicken, yak, and goat. Bhutan is bordered by China and India. Vegetable dishes are very popular as well (*Customs and Cuisines of Bhutan*). Vegetable dishes are very popular because Bhutan is a Buddhist kingdom. Buddhists believe in ahimsa, which is the ethical principle of not causing harm to other living things. Many Buddhists like the taste of meat, so they interpret ahimsa in a way that allows them to continue to consume meat. If they don't kill the animal themselves, or have the animal killed specifically for them, then they can eat it because the animal is already dead (*Ahimsa*). Most dishes are served hot and spicy, like those of Bhutan's neighboring countries. This also shows the strong influence China and India have. If their food style has spread all the way to America, it only makes sense that there would be a strong influence in the countries right next to them. Rice is also a large part of their diets, as it is a staple crop. Though Bhutan's food has been influenced greatly by China, Tibet, India, and other countries, its food still remains unique by its added spices and lack of oil (*Customs and Cuisines of Bhutan & Neubauer*).

Despite having limited food resources, Bhutan's people do have access to free health care, education, and electricity (*Bhutan Health Insurance & Qehaja & Bhutan*). 63% have access to toilets, and 95.6% have access to telephones (*UNIEF Bhutan & Helgi Library*). Half of the population has access to roads and local markets (*BTI 2020*). Many families in Bhutan live in poverty (Jewayni). Most living in poverty are in rural areas.

Of all the children in Bhutan, 37% are stunted due to malnutrition (Jewayni). Malnutrition is affecting children more than anyone else, and the main reasons for that is poor practices of infant feeding, as well as a 50% anemia rate among young Bhutanese mothers. While a problem, these trends are improving (Hughes). The UNDP (United Nations Development Program) is putting forth efforts to stop these numbers from increasing. They have started programs that feed 41,000 children in rural schools, help farmers with agriculture, and reduce poverty. Malnutrition is affecting rural populations greatly. Because they rely mainly on agriculture for their food, they are more food insecure as many of their frequent natural disasters destroy crops. With limited access to markets and roads, this can become a large problem for rural populations. Urban populations are indeed affected by malnutrition, but not as much as rural populations since they have more access to food and markets.

Education in Bhutan is free for six years. Education was first provided only by monasteries, but in the 1960s a modern education system was introduced. Only 50% of Bhutan's children go to school, but more are beginning to attend. Going to school is not required by the law, so because many children don't go to school it makes sense that Bhutan has only two universities (*Countries and Their Cultures*). Because the schools have half of Bhutan's children attending, the UNDP and WFP (World Food Program) have chosen schools as their target place to begin feeding children. Partnered with the Royal Government of Bhutan, they have managed to feed over 41,000 students two meals a day in rural boarding schools (Jewayni). In the Haa district, 17 school teachers and 13 school cooks are involved in the the Integrated School Feeding and Nutrition Workshop. Another workshop conducted by WFP, with the help of Ministry of Education, Ministry of Agriculture and Forests, Ministry of Health, Haa District, and KOICA, possibly benefitted over 3,000 children. In some of these workshops, they addressed the relationship between natural disasters and malnutrition, and taught participants how to best respond to natural disasters and be well prepared for them. Specifically, in that workshop, the participants were responders, who were being taught key understandings on the concept of humanitarian supply chain and logistic management. These participants had a simulated case study based on the Nepal Earthquake, to help equip practitioners with practical and conceptual knowledge on relative logistics and support functions. These attendees were apart of the National Logistics Working Group (*WFP Bhutan Country Brief*).

These organizations have also been using schools to reach out to families, so more than just students are getting fed. Through the WFP's support in RAMCO (the Regional Agriculture Marketing and Cooperatives Office), 14 schools have agreements with 246 households for the supply of agricultural products for the academic year 2021, under Lhuentse Dzongkhag. This reassures the supply of food for students, and it allows families to be paid so they can keep their children nourished at home as well as at school. Another workshop's goal was to review the schools' feeding supply chain KPI's. They come up with plans and strategies to improve these actions. That workshop consisted of 62 participants, from 20 different schools and government agencies. Therefore, the future solutions to malnutrition are not confined to only what is currently being done. School isn't the only thing they're helping with. The UNDP is also helping rural farmers increase their agriculture productivity, and they are helping people find jobs off of farms as a poverty reduction strategy (*WFP Bhutan Country Brief*).

These strategies could prove very effective to lowering the numbers of malnourished children. However, I have a few recommended strategies. First of all, to take advantage of what's already in place, I propose the enforcement or promotion of primary and secondary education, if it is within local access. This way, the children that have schools they can go to are getting food from the programs set in place by the UNDP and WFP. Going to school will also increase their chances of a more successful future, which is then lowering the chances of their own future malnutrition and their own future children's malnutrition. As well as promoting education, other things could be done to help secure food in rural areas of Bhutan. Much of the malnutrition is due to lack of food, and the lack of food can be due to limited access to food. The construction of roads to lead to larger markets could help with this. Because only half of the people in Bhutan have access to roads and local markets, building both of these things could help greatly (Jewayni

& BTI 2020). The construction of roads and markets could also create business opportunity for people in rural villages that they didn't have before. Being confined to their hometowns because of a lack of roads means there's not a large variety of careers. They can't simply go and work for large businesses if there are no large businesses around. So most of them have careers they started themselves, most commonly farming and livestock. Still, the introduction of roads and markets wouldn't require them to change their job if they didn't want to, but they would have more business from it. Having markets to access would allow them to sell more of their products, because there'd be more customers. In turn they would get more money, which would allow them to get their children to schools via these new roads and allow them to be fed. Having job opportunities outside of their specific villages could help reduce poverty, and thus reduce malnutrition.

To improve the current agriculture situation, the government could permit the plains in Bhutan to be entirely farmed, and have a few plains cleared of trees for growing crops. Looking at pictures of farmed plains in Bhutan, I noticed that not all space that was clear of trees was used for farming. Using all available land to farm crops would increase product amount which in turn would increase revenue. The increase in food itself also would solve the problem of malnutrition in children, because often malnutrition is simply a result of a lack of food.

Jobs away from home aren't the only ones that could help provide for malnourished families. Agriculture and cattle farming are the two largest occupations in Bhutan, and I suggest that rural Bhutanese citizens invest in more livestock (*The Complete Guide*). Livestock isn't destroyed as easily as crops in a natural disaster, as animals can be moved and found again, if lost. Cows are a great start for livestock, but chickens, goats, and pigs would make good business as well. With chickens, you would get eggs daily, assuming you have egg laying hens. This can be a great food source, and if all else fails, the chickens themselves can be eaten. Goats, on the other hand, do not provide meat often eaten such as cows, but they do produce milk that can be drunk, sold, and turned into cheese and other dairy products. Not only is raising goats helping feed people, but also goats require less space than cows. Cows could be a great livestock business starter for a family living in poverty. Pigs would also be great to raise as a food source as well. They eat practically everything, so they will not only dispose of food waste, but they are also good and plentiful sources of meat. With an increase of livestock, Bhutan's people wouldn't need to be relying so heavily on crops, and could potentially have a more sustainable permanent food source.

Investing more in agriculture and livestock in the country of Bhutan could prove to not be the best solution. They simply lack the space for it, because their constitution requires that 60% of the land in Bhutan be protected forest area at all time (*Bhutan: Committed to Conservation*). So using some of the remaining 40% of land for urban cities and rural towns, this doesn't leave a lot of land for fields or pastures. This is where Bhutan's location will prove advantageous. It's surrounded by China and India, who produce a lot of crop. China is the number one agricultural producing country, and India is fourth (Admin). So Bhutan could simply get their crops imported from China and India. Since it's right next to those countries, the importing fees would be rather cheap, especially compared to the price of shipment to other countries like the U.S.. However importing these crops could lower the need for farmers in Bhutan. So instead of being farmers, they could pursue careers in tourism. Just in June 30 of 2022, Bhutan reopened itself up to visitors since the Covid pandemic shut things down (Reuters). Bhutan is a desirable vacation spot because of its warm climate and beautiful country side, and historical monasteries. If local people shared their knowledge as tour guides, opened up activities for tourists, or even did airbnbs, considerably good profit could be made in place of farming.

If tourism jobs wouldn't be sufficient pay for the imported crops, Bhutan could earn money by allowing China and India to construct major highways through Bhutan to connect China and India. Looking at maps of major highways, I noticed that there seem to be no major highways connecting India and China straight through Bhutan. This could be inconvenient for people traveling through Bhutan to get from

China to India, and vice versa via automobile. These roads could be built to pass near urban and rural cities, so that children can have access to schools and provide more jobs for Bhutan's adults. The construction of these roads would provide jobs to any who can work. Then after the road is complete, there will be need for gas stations, mechanics, grocery stores, etc., which will all provide jobs that need to be filled. The money for this would come from China and India, as they would want the road there and pay for it. To balance the pay needed for this increase in jobs, there could be tolls for passage on the roads. This money could go to the government and be used to pay these new employees and fund the construction of more roads and schools. Importing goods from China and constructing these roads would be a wise economic move to help improve the nutrition of children.

With the help of the UNDP, WFP, and other organizations, it is likely that malnutrition numbers in Bhutan could be brought down to an extreme low. Continuing with what has already been done in schools to feed over 41,000 children two meals a day, as well as potentially starting some of my own recommended plans, Bhutan could become the perfect kingdom its stunning countryside tells it to be (Jewayni).

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