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India, Factor 13: Demographics

India: Addressing India's demographic problem to stop starvation

India has an interesting situation when it comes to food security. Due to a strict social order, volatile weather, and an increasingly growing population, it cannot provide enough food to feed its residents. The massive subcontinent of India covers approximately 1.269 million square miles making it the 7th largest country in the world. Its enormous population is 1,210,570,000 giving it the second largest population in the world, and India is expected to pass the 1st place country, China, reaching 1.45 billion people by 2028. (*Central Intelligence Agency*)

The typical family size in India is 4-5 members. This generally consists of a mother, father and 2-3 children. This may not seem like much, but if you consider that there are over a billion people in India, that means there are about 242,114,000 families in India which is a significant amount for any country. These large populations also lead to another concern, are people getting the necessary nutrients and supplements needed in their diet? The answer is yes, however, barely: the overall general diet of the citizens of India does provide the bare minimum needs. Orphanages, though, which make up a large percentage of India's population, are far below the bar of necessities. The food at an orphanage consists of cereal and vegetables with little or no milk products, fats, oils, and fruits. This is especially detrimental because the lack of fats in a newborns diet can lead to serious brain development issues such as mental retardation and behavioral problems. The education of the people of India is lacking in areas such as language, science and other subjects many consider to be the basics. While India's 74.4% literacy rate may seem like a reasonable rate, it is not. Seventy-seven percent of India's population being able to read, means that 309,905,920 people can't, and that number shows that India contributes to 22% of the world population being illiterate. (*Access to Elementary Education in India*). The access to health systems in the country of India is also very limited due to the very strict social hierarchy otherwise known as the caste system. Since everyone has a place and is expected to stay in that place, it can often be difficult to receive medical attention whether it be an emergency or a simple check-up with a doctor.

The available farming ground in India is utilized to the most efficient extents possible with the country's underdeveloped technology and farming practices. The significant farming systems that contribute to India's welfare include: subsistence farming, organic farming, and industrial farming. The typical size of a farm in India is 1 hectare, which equals the area of a 100m X 100m plot. However, while this is the average size, 70% of India's farmers have plot sizes smaller than a hectare. (*India Background Info*)

The crops grown for food security in India are grains and rice. This is not enough to support any country, and it also does not provide essential nutrients. Rice is highly nutritious, but a monstaple diet is not. The animals that are grown and raised for food are few. These animals include chickens, sheep, buffalo, goats, and pigs. While the options are various, the amount of meat available from these animals is small, due to the small amount of harvesting these animals. Since availability of land in India is quite limited, when it is used for agricultural purposes, it is used to it's best capabilities with the knowledge currently possessed.

The farming practices used in India to best utilize the land are irrigation farming, shifting cultivation farming, co-operative farming, and crop rotation practices. Irrigation farming is growing crops with the help of irrigation systems by supplying water to the field through rivers, reservoirs, and wells. This is one of the more shunned practices as it often uses water that is crucial for the people as it is a fairly scarce resource in a country with this many people. Shifting cultivation is a type of subsistence farming where an

area of land is cultivated for a few years until the crop yield declines because of soil exhaustion. Once the crop has become stagnant, the area of land is deserted, and the ground is then cleared by slash and burn methods. This allows the land to replenish itself. However, it can often take a long time for the land to replenish itself. Co-operative farming is a new system in India. It is designed to bring all of the land resources of farmers together in an organized way so that crops can be grown on as much fertile land as is possible. Crop rotation is another type of subsistence farming that is commonly used in India. (The Cultural Ecology of India's Sacred Cattle) This practice is done by alternating between different crops each growing season but on the same land. This allows the crop to get its needed nutrients from the land while the needed nutrients for the previous crop are being replenished at the same time. This practice is often used in India to improve and sustain soil fertility, check erosion, reduce the build-up of pests, mitigate the risks of weather, use less chemicals that are harmful to the environment, as well as to increase the profit and production of the farm. (American Meat)

The size of farms in India has been cut in half over time since 1971, and this is proving to not only be a cause of yield reduction but also a cause of death. In 2003 the same farm that supported one family in 1971, now had to support two families with half the land. This is due to the splitting of farms among the sons of farmers. With the large population India is trying to support, there are little employment opportunities, so the sons have little choice, but to farm on what they receive of the family farm. The average 48% of the farm the sons receive does not provide nearly enough to support even some of the smallest families in India, and it puts these farmers well below the poverty level. (India's urban poor need 40 mn houses, 500 health centres)

Another impediment to increasing productivity in India is the country's rudimentary technology. With their lack of advanced technology, they often aren't getting the maximum yield or most efficient way of increasing animal production. Technologies that could help are: irrigation systems and tools like plows, shovels, buckets, and baskets. Many would think machinery like those used in many countries would be needed, however affording this machinery is impossible as is finding a place to store it. Because of India's strict caste system, the many citizens have either no job or a very low paying job. If a person does not have enough money then they cannot afford to buy food for themselves, or in most of the residents' cases, food for their large family.

Another issue is the country's infrastructure. Roads and communication systems are few, and the few that do exist are of poor quality. This prevents people from accessing food markets, vendors, and food in general. If one doesn't have access to food then they are losing the few nutrients that are available in India. The most common deficiencies in India include Iron, Vitamin A, Vitamin D, Zinc, Folate, and Iodine. The most serious of these are Iodine and Zinc deficiencies. Iodine deficiencies are dangerous because if a mother is iodine deficient during pregnancy her child could have mental disabilities. Zinc deficiencies are a major problem because they can delay growth, cause impaired immune function, and delay sexual maturation.

Of the many issues endangering India's food security (malnutrition, water scarcity, water sanitation, infrastructure, and demographics) one increases all these problems and is far more dangerous than the others. This factor is demographics. The population of India has more than tripled in the last century and is literally growing at an exponential rate. India had trouble feeding all its people 100 years ago and now with 3 times as many mouths to feed, the situation has become dire and is only getting worse. So many people are trying to buy food in India that is in short supply. Many things influence if a family eats or doesn't. One of these influences is that everyone is trying to buy food, but as stated before they don't have a lot of money due to the lack of jobs for such a huge population. This causes the price of the small amounts of food that are available to be highly inflated.

The dangerously high and continually increasing population of India has led to thousands of deaths. If it is not addressed and fixed soon, hundreds of thousands will die. Surprisingly almost everyone in India, apart from the rich, are equally affected by this. In many countries there is often a difference in the treatment of women and children or rural to urban areas, but in India the only factor determining food security among different societal levels is money.

The situation as stated earlier is only getting worse. How prevalent this issue is can be measured by the deaths due to starvation, unemployment and then comparing the areas with these issues to population density maps. These measurements continue to show exactly what should be obvious to anyone in this field. This predicament is also getting worse for the typical family and farm in India. The rich know that this is happening; however, many do nothing partially because of the caste system but largely because many of them do not care. In order for the country to ensure its food security, the resources and money of these uncaring and apathetic people need to be put to better use.

Improving the ever-dwindling food security of India would be beneficial not only to India but to the whole world. The way to do this is by addressing the demographics. Addressing this problem will allow India's economy to grow as well as bring poor farmers who can barely support their families above the poverty level. Once the problem of demographics is fixed, the whole world will be benefited. When India's food security is stabilized, it will have a workforce capable of growing its economy, ensuring everyone's food security, and with time, growing India's agricultural stability to the point they can afford to export what years before, would have seemed an essential they couldn't give up.

While usually the food security of a country is threatened by one issue and contributed to by other factors, it is the opposite in India. Malnutrition is a big problem in India along with its infrastructure, and water scarcity/sanitation issues. These are major threats to India's food security. However, for every single one of these problems, the root of the problem is demographics. With so many people in India, it must be considered that many will be unemployed, and so will not be able to afford even the most basic of food essentials. Along with that, there is also the cost issue. With so many people all competing for India's already limited amount of food, the only way to make it last is to raise the price, and that is something the people of India literally cannot afford. (Country Analytical Review)

There is no one way to fix the food security issues in India. However, the best way to fix the food security problem in India is to educate the people, specifically the farmers. Non-profit organizations and other organizations such as the United Nations need to come into India and educate the people of India about safe sex and the precautions that can be taken to prevent pregnancy. These precautions can include birth control, condoms, and a general knowledge of safe sex practices.

These organizations can also teach the farmers about more efficient farming techniques to enable the country to feed the existing population. One such farming technique is called Rotational Grazing. This process involves splitting up a pasture and putting cattle in one section to graze. Then after a period of time they would be moved to a different area of the pasture to graze. This is extremely effective because while the cattle are in the other section a portable hen house is brought to the section they previously were grazing in. The chicken's waste then fertilizes the ground, and the nutrients from their waste eventually get to the cows which provide better, more nutritious, larger quantities of milk. During this process, eggs are collected from the chickens, top-notch milk is produced by the cows, and the land is fertile and capable of producing large yields. This is an all around gain with little to no expenses making it ideal for poor farmers in India. (American Meat)

Another way education would be beneficial to stabilizing India's food security is through the knowledge of what crops need to be grown to allow people to get needed nutrients. This will make stronger, healthier citizens. If people are healthier, then there won't be as big a need to fund as much health-care. These

funds can then be used on community projects to buy seed or provide food for the many who have none. These funds could also be used to pay for farmers and other food providing groups/people to receive training to know how best to utilize the land, resources, and money that are all scarce for most of India's inhabitants. When discussing this issue many often misunderstand that being healthy includes eating, but having health-care means access to medicine and doctors. If eating many would get sick less often and need less medical attention.

A great way that organizations and relief groups such as church groups, school programs, and foundations can help is by raising donations. Often when a group asks for donations, they get all types of items due to the lack of communication over what is needed. If these groups specified the things needed to help the people of India such as money, seed, and basic foods that can be preserved or last long periods of time, then these groups will be helping to feed a nation that makes up almost one-fifth of the entire world population. Another great way these groups can help is through awareness. Many people would be willing to help or donate, but don't, due to the fact they really don't know they can.

India is a country that has amazing potential for economic growth, world trade, and supporting a strong citizenry. The humongous unfed population of India, however, is holding it back from achieving its political and economic potential. If the people of India are fed and become nutritionally stable, then there is no telling what they achieve. As is so common with anybody or any group, India's greatest strength is its greatest weakness. India's population allows for it to have potential that other countries only dream of having, this gives it the possibility of becoming a world power capable of rivaling China, and with time, even the U.S. However, having unfed, unhealthy, unproductive citizens is helping no one, least of all India and is only holding it back. (Population Finder)

If the people of India are educated in areas such as safe sex, proper farming techniques, and are given help by those who are most definitely more fortunate, then India will become a healthy country capable of any amount of successes and progress. Feeding the whole world is not done overnight, but starting in a country with potential like India is a great place to begin. If India's food security were to be secured, maintained, and improved; then India too, could join the fight against world hunger while still feeding its own people. Feeding the world is becoming the most prominent and imminent problem in the world. Helping India get on its feet is a great place to start with this problem. Allowing people to eat and go to bed with a full stomach and the knowledge they will eat again tomorrow is unimaginably important. Making sure the world will eat is an issue, but an issue we can do something about. And that means something.

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