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Pakistan Factor Number 5: Climate Volatility

When we think of different cultures, we think of many different aspects, which come together to make up a certain culture. For example, in the Middle East, they are mostly known for their strict religious practices, for their colorful celebrations, “Bollywood”, the dress, and the languages. Sometimes the spicy cuisine is noted along with their unique dinners and dishes making sure to be noticed. However, when we think of Middle Eastern cuisine and food, maybe we aren’t thinking about it the way we should be. Pakistan is one of the more known Middle Eastern countries. Their eccentric culture praised all around the world, and the traditions and cultures make it unique. However, when most people think about Pakistan, they only skim the surface of what it really is, and what goes on inside of the country. Many people don’t know what lies behind the culture of Pakistan

In Pakistan, it’s common to have an urban family. An urban family in Pakistan would be smaller than a rural family, because in rural families, they live on farms, where there is room for a lot of extended family to stay with them. However, in an urban family they live in the city, many in apartment buildings where it’s smaller. The average number of people in an urban household is about 7 people (7.2). Recently, in urban areas, the family has begun to consist of just the mother, father, and children.

Next, Pakistan’s education system is managed by the Federal Ministry of Education, who is required to provide free and compulsory quality education to children of the age group 3 to 16 years. In Pakistan, gender discrimination in education occurs amongst the poorest households but is non-existent amongst rich households. Only 18% of Pakistani women have received 10 years or more of schooling. Among other criticisms the Pakistani education system faces is the gender disparity in enrollment levels. However, in recent years some progress has been made in trying to fix this problem.

The average diet is chapati or roti, an unleavened bread similar to pita bread. Pakistani food is generally spicy and oily. Observant Muslims do not eat pork or drink alcohol. Only the more affluent families can afford to eat meat (usually mutton, lamb, beef, or chicken) or fish regularly. In urban areas, many people have dining tables and may eat with utensils. Since Muslims are forbidden to eat pork or consume alcohol, halal dietary guidelines are strictly observed. Pakistanis focus on other types of meat, such as beef, lamb, chicken and fish, with vegetables, as well as traditional fruit and dairy.

Pakistan is home to diverse cultures, booming technology, and bright future for the country. However, on top of all the things that this unique nation has, agricultural sustainability isn’t one of them. As important as agriculture may be to a country, it’s the one thing that Pakistan lacks. With agriculture making up only 24% of Pakistan's GDP (Gross Domestic Product), Pakistan cannot get very far in the future, if they keep this up. Pakistan has vast potential to use its agriculture grounds for the maximum effect.

Pakistan has much potential to use its land to expand its agricultural field but unfortunately, they don’t know how to use the land that they have to their advantages. One of the problems that Pakistan had was the most recent flooding, in 2012. Flooding is a major problem that puts a halt on the agricultural industry. According to the FFC, Pakistan has had over twenty major floods in the last century. Some of the most devastating floods occurred in 2010. The month long flooding of 2010 was the worst flood Pakistan had seen in over 80 years

The floods have affected 599,459 square kilometers. All of this is precious farmland that is being destroyed. When it constantly floods, it begins to have a giant impact on the soil and the farmland.

Erosion of agricultural soils can begin to occur, and “Flooded soil syndrome”—loss of beneficial fungi which mobilize soil-based plant nutrients. As a result of this, farmers began to lose crops, because they can’t plant them on tainted soil or yield little flower and root. In Pakistan, the NDMA says the floods have so far affected 81, 674 people of 333 villages, damaged 135,076 acres of crops, completely destroyed 2,533 houses and partially damaged 1,782 houses. In the last 63 years alone, these devastating floods have had tremendous impacts on 180,234 villages, in more than 599,459 square kilometers area. The floods have taken 11,239 human lives and cost over Rs39 billion to the national economy.

Aside from issues such as their major flooding, Pakistan also faced an earthquake in 2005. In October 2005, a 7.6 magnitude earthquake rocked. More than 80,000 people died as a result of the earthquake, while an estimated 4 million others were left homeless.

When earthquakes occur, not only do they immediately affect the country and the people, they also have tremendous effects on the agriculture industry. Earthquakes impact on food security and agriculture-based livelihoods because earthquakes result in loss and injury of family members, and workforce loss of crop yields and livestock damage to irrigation systems, damage to farms. When earthquakes occur, it knocks down the agricultural system. Pakistan, in its smaller, fragile state, didn’t even get to try and rebuild itself, because another flood occurred

Yet another problem occurs in Pakistan. For the past three years, Pakistan’s southeast side has been facing a major drought. The water-stressed region is prone to drought-like conditions because of inadequate and erratic rain. The region has plenty of underground water, but much of it is saline. Waterborne diseases and malnutrition are the most common causes of death. This means that people have no choice but to drink the saline water, and thus they are dying as a result of it. In 2014, local media blamed hundreds of infant deaths on the drought. Because the children don’t have enough to eat/drink, they are dying. Because of the lack of water, many farmers are unable to give water to their animals, and the lack of water makes it difficult to food their crops, so they die.

All of these major problems that Pakistan faces towards its agricultural can be grouped into one larger category: Climate Volatility. Climate volatility is when the weather and natural disasters have such a huge impact on a country; the country is not able to produce enough food for itself and to flourish. In Pakistan, they aren’t able to efficiently produce crops, because of the terrible natural disasters that often occur.

However, Pakistan is blooming in potential, because the climate is amazing for growing produce, but using the ground simply isn’t an option. Instead of thinking about the ground, Pakistan needs to focus on going up. Vertical farming is the practice of producing food in vertically stacked layers, vertically inclined surfaces and/or integrated in other structures. By building structures so that they can grow food up, instead of on the ground, they don’t have to worry about the next flood.

To fight it’s growing problem of world hunger, Pakistan should invest more in vertical farming. They can do this by increasing their support in SRSP (Sarhad Rural Support Programme). This program is very beneficial and can help Pakistan in many ways. The farming (rural) families of Pakistan can trade their ordinary farms that often get ruined by the disastrous weather and create vertical farms They will yield more food, they are more structurally sound, so the disastrous weather will have little to no effect, it saves water, and because the SRSP program offers incentives for it.

Sarhad Rural Support Programme (SRSP) is a program that offers incentives to farmers in Pakistan that practice vertical farming. Not only does this give money to already struggling farmers, it also educates them on what it is and how it’s beneficial. Even if a farmer only does it for the incentive, once the farmer sees how well it works, they will use it more often, and increase their crop yield. In “When I was using traditional farming methods, I produced 1,410 kilogrammes of tomatoes on two kanals of land. But this

year, I applied the vertical farming technique and produced 2,122 kgs,” said Ahmad Hussain, a farmer in Hazara village (Fazal Khaliq, Tribune.com).

The (SRSP) is a very beneficial program to Pakistan; it does much great to the struggling country. Since it started work in the Khyber Pakhtunkhwa region 11 years ago, the Sarhad Rural Support Programme (SRSP) has constructed 189 village micro-hydro schemes and brought power to around 365,000 people in the area. (John Vidal, Guardian)

By providing support to this program, we can help this program grow. This support can help this program grow to its full potential. By growing to its full potential, it can help as many people as possible. Vertical farms are one thing the (SRSP) supports. Vertical Farms can increase the yield of crops grown in Pakistan, with less water needed, and it takes up less space, and can help yield more crop. The vertical farming structures will be secure and be able to withstand earthquake condition. Everyday citizens can help support this foundation by spreading the word and promoting awareness. The more people know the more they are able to rise up and help. Most who don't know what vertical farming is and why it is important aren't very likely to support this cause. If we can spread the word and get awareness, we will be able to help more people. Spreading awareness can also cause more people to become interested in vertical farming as well

In conclusion, Pakistan has much potential for agriculture; however its climate volatility leaves it struggling to produce enough food. Because of this lack of food, Pakistan suffers from major food insecurity issues. The earthquakes, floods and drought all contribute to Pakistan's struggle to have sustained agriculture. The solution may lie in vertical farming. Vertical farming grows up, instead of out, which uses less water, takes up less space and yields more crops. By using vertical farming, you can save water, which helps in the case of droughts. Since the farms grow up, you don't have to worry about floods, and the structures are sound enough to protect against earthquakes. Sarhad Rural Support Programme (SRSP) is a program that offers incentives to farmers in Pakistan that practice vertical farming. In supporting this program, we can help farmers grow more food, and yield more crops to help solve for food insecurity.

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