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China, Pollution

China's Pollution Problem

China is an Asian country bordering Mongolia, Pakistan, North Korea, and Russia with a population of approximately 1.3 billion people. Most of the population of China lies in urban locations and grows at a rate of 2.42% annually. China is led and governed by a type of government called the communist party-led government. China has cultivated 54.7% of its land for farming (Central Intelligence Agency, 2018). Their main product is rice, wheat, corn, soybeans, and tuber crops (China.org, 2000). The average farm size in China is 0.6 hectares or 1.5 acres (Krishnamurthi, L., & Khandelwal, S., 2011). That is the size of one and a half football fields. The climate in China is diverse, as it is tropical in the south and subarctic in the north. China is the fourth largest country in terms of size, being approximately 3.705 million miles (Central Intelligence Agency, 2018). However, their carbon footprint is too high to deem normal, leading the country to try many different tactics to clean the air pollution.

China has a large population, but the average family size in China is 3 members. However, it is not uncommon for multiple generations of family to live under one roof (Statista, 2019). The usual family diet consists of rice, as it is a dietary staple in China. However, in the north and west where it is too dry to grow rice, wheat is the staple grain. In the north, breakfast usually consists of noodles or white bread. In the south, rice porridge or congee served with shrimp, vegetables, and pickles usually serve as the breakfast meals. Lunch is much similar to breakfast, but dinner is something else entirely. Dinner is the largest meal of the day with the last course typically being soup. Even though China is a very large country, it can still manage to feed itself (Everyculture.com, 2006). They cook most of their meals in a wok. This is a specially designed metal pan with a curved bottom (Peng Gong, n.d.). Chinese jobs consist of managing chemicals, consumer products, food processing, machine building, mining, technology, textiles, and transportation (Federal Reserve Bank of St. Louis, 2018). The average yearly income of a Chinese worker is around 21,586.95 yuan, or about \$4,400 US Dollars (Jemma Smith, 2017). China's education system is run and funded by the Ministry of Education. Nine years of school is required out of a citizen (Ministry of Education of the People's Republic of China, n.d.). Healthcare is affordable and almost necessary. In many parts of the country, the tap water is undrinkable. However, it can be drunk after it has been boiled and cooled. Drinking this dirty water can cause diarrhea (Travel China Guide, n.d.). Normal toilets are usually found throughout China. However, it can be common to find a toilet that is flush to the ground. These "squat toilets" are not seen in western China but are more common in other parts of China (China Highlights). Out of all the precautionary ways to use energy, China continues to use coal as its top producer of electricity (Sawe, 2019). Cell phones are a major export of Chinese culture. It has the highest growth rate in all the electronic industries in China (Baidu, n. d.). Thanks to the immense amount of trade, China is interlocked between miles and miles of road. Furthermore, in

the past years China has increased their roads considerably (Author). China has even recently tried to recreate the Silk Road with a new route dubbed the “Belt and Road Initiative”, or the BRI (Chatzky , Andrew, James McBride, 2019). China uses the socialist market economy, which is the economic system and model of

economic development employed in the People's Republic of China. The system is designed off of individual shops within the market economy, offering the competition of capitalism with the coordination of socialism to make a coordinated market economy (Xiaoqin, D., n.d.). As China grows as a population at a scarily rapid pace, one of its major downsides is the widening wage gap. Today, even while the economy slows, income inequality remains prominent in China. The rich only get richer and the poor only get poorer (Hsu, S., 2016). Even more so of a problem is the high demand for agricultural foods, such as dairy and meats. Inflation in prices and growth in population over time led to deforestation and overgrazing (Chan, C., 2011).

The air quality in China is of utmost concern. While the smog in China is not lethal, it can aid in the development of extremely harmful diseases. Medical treatment has evolved and flourished over the years, being exposed to this smog can create some troubles, such as heart attacks, asthma attacks, and bronchitis. Not only does the smog pose a deadly health risk, but it also can affect the working order of society and nature. Traffic accidents have dramatically increased due to the smog (U.S. News, 2017). Studies show that plants do not photosynthesize as much as they use to due to the lack of sun. Applied to a large scale, this epidemic can and will affect agriculture in China. This would lower the amount of food on their market and escalate food prices for consumers, eventually leading to tons of citizens at a loss for food. (South China Morning Post, 2014).

In early 2017, Beijing saw smog so bad that just breathing that air in for a day was as bad as smoking 40 cigarettes. This is not confined to just Beijing, though. The whole country is affected by the smog. It is just as bad when you leave the city as being in the city. While air pollution has improved over the years, it is nowhere close to a reasonable level (Ronson, J., 2017). China’s biggest contributor to this problem may lie in the fact that they consume the most amount of coal in the world. China burns more coal than all other countries combined (Wong, E., 2018). The problems in urban cities are just as prominent in rural areas. Some examples of these are that mining companies “ride roughshod” over the environmental laws and cottage industries dismantle electronic waste, creating their own health hazard (ChinaDialogue, 2017). Interestingly, men have a more negative effect from breathing in smog than women do because of the different compositions of grey matter and white matter. Grey matter’s job is to process information while white matter takes said processed data and links them to each other. It has been shown that air pollution greatly affects white matter more negatively than grey matter. Seeing as the male brain is composed more of grey matter and does not use much of their white matter when facing a test or challenge, it comes as no surprise to anyone that men are affected more than women (n.d., Smog in Our Brains: Gender Differences in the Impact of Exposure to Air Pollution on Cognitive Performance). While men are affected more than women, children and the elderly are affected much worse than your average person. Children that haven't developed a strong immune system or elderly that have failing immune systems are at a much higher risk (Jianfen, Wang, 2015). Air pollution has a higher effect on minorities due to their harsh living conditions in major, air-polluted cities that have poor air quality. This is because

they are constantly breathing in the polluted air. It also majorly affect the environment by reducing overall growth and beauty of the environment. This will remove valuable resources for us as well, things like the lumber, clean air, clean water, and the natural beauty of nature (UK Air Pollution Information

System, n.d.). Finally, it caused the sun to be blocked from photosynthesizing plants and the air quality to be too low for plants to grow. This deeply affected urban and even rural farms as food production was at and all-time low.

One solution that China has tried is to put a cap on the consumption of coal and increase the use of filters called scrubbers through a bill called the National Action Plan on Air Pollution. This solution has been in place since 2013 and since then, China has gone from the largest importer of coal to the largest exporter of coal. This bill is good because it definitely cut air pollution down a measurable amount. However, it is noted to be an outright ban on coal rather than be a cleanup procedure (The Economist, 2018). Another solution that was used was to transfer their power from a coal-based power to more green techniques such as solar power and wind power. This will reduce there toxic air pollution output by a large percentage, but everyone is paying the price for cleaner air. Taxes and prices must rise in order for more solar panels and wind turbines to be built (ChinaFAQ, n.d.). While these are both good ways to reduce air pollution output, they find themselves at a barrier. Big companies tend to want to stick with fast and cheap methods for production of goods. Reducing the consumption of coal or implementing in scrubbers would cost around 20 billion dollars (Baasel). The government could overcome this by offering free publicity and advertising to companies that comply.

According to the State Council, 60% of all Chinese cities will meet the requirements to be called healthy in 2020, which it said was up from 40 percent in 2012. However, at China's annual parliamentary sessions, officials said only three of 74 major cities met the cleanliness goal in 2013 (Scientific American, n.d.). These solutions are great, but I have my own that I think could be very effective. One of the greatest ways of cleaning the air is the use of green plants. My solution consists of the recycling of unused plots of land and creating a garden of massive amounts of green plants. A law would be passed saying that every building must have a certain amount of greenery within/around it or the owner of the property would have to pay an annual tax. This could mean more parks and gardens to filter the smog. The China Energy Conservation Investment Corporation (CECIC) would be in charge of the operation, making sure everyone is doing their part to clean up the air. The CECIC would also release to the press what this new solution is, how we are funding it, and why we are doing it. This would cause the news of my solution to be passed through media to voters.

Funding this would be difficult, so the export of unused coal could be sold and be used to fund the large-scale tree planting. In addition, a tax of 10% of the average income could be given to all people who do not have the correct amount of greenery around there homes/buildings. This tax must be paid by the owner of the property and not (for example) employees. However, if a citizen believes their income is too low to pay the tax or care for the plants without hardship, they can fill out a form by the CECIC and then, if they qualify, they will receive plants for free provided by the CECIC. The tax would not be paid for if the citizen owns and is taking care of a

specific amount of greenery within their property. The government would be in charge of raising money and overseeing the project. The communities are

paying a little portion for the cause while also helping by planting greenery around their property. Organizations could be in charge of planting the larger scaled projects, such as gardens and parks. Foreign aid is a possibility, and would make the production of this solution much smoother. For example, America could supply the benches, fences, greenery, trees, ect. needed to help create parks and gardens. Citizens might find this foreign aid to be good because it helps both sides. China is receiving everything needed to start this project while the U.S. is paying off a portion of their debt to China. We need to make sure these plants are not interfering with the normal life of a civilian. Examples would be taking up too much room or being in the way of cars. Granting those who plant greenery could be implemented and advertised by the government to encourage more people to follow the solution. The government could also grant reduced tax to anyone who plants a tree. Local government could help spread my solution by giving out free trees (possibly in honor of a deceased member of the community). The individual could help by planting the greenery and encouraging peers to help. According to the Arbor Day Foundation, in one year, a mature tree will absorb more than 48 pounds of carbon dioxide from the atmosphere and release oxygen in exchange (U. S. Forest Service, 2019). When buying trees, the first cost to consider is the average price of trees. Tree prices differ based on their availability. However, on average, your typical tree costs around \$200. More expensive varieties of trees can cost \$350 or more (Smith, S., 2011). Besides these high numbers, people would be happier to be in a green environment, living more sustained lives (ACS, n.d.). With the newly found oxygen, animals could create carbon dioxide for plants to breathe and clean up the air, making way for more sunlight. Farms would be more abundant because of the cleaner air and the crops themselves would help in the aid of the cleanup job.

It is important to keep this planet as healthy as possible. My solution aims to focus first on the reduction of China's carbon footprint and second on the well being of the citizens who live there. While my plan is a big change for the citizens of China, it will improve life for everyone. We all have to take care of this planet, but no one wants to get rid of the luxurious lifestyle we live in. At least, not until someone takes the first big step.

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