

Susceptibility to Climate Change Across the Regions of the World

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Due: 5/7/21

Across the globe, climate change is a serious threat that continues to get worse as millions of people's livelihoods are significantly affected. As we continue to burn fossil fuels and Greenhouse gas, the earth's temperature goes up because the atmosphere traps more heat. This phenomenon of global warming will continue to have adverse effects on the climates of many regions of the world. Natural disasters like hurricanes and cyclones will become more frequent. Drought and flooding will increase in many areas while many places will experience a lack of fresh water. There will be more instances of regions losing the ability to grow crops because they will become deserts (National Geographic Society). While many governments continue to only do the minimum to prevent it, These problems get worse and will affect the less fortunate much more than the well-off. Every region of the world is vulnerable to climate change, though the most vulnerable places are around the equator between the tropic of cancer and Capricorn. Susceptibility to climate change correlates closely to inadequate governments and poverty.

Climate change susceptibility is much worse for regions near the equator and at midlatitudes because people will be affected more by the adverse effects of the changes caused by global warming. In Hurricane regions such as the Caribbean and Southern coastal parts of the United States storms will increase in frequency causing flooding and lots of property damage. Places like Florida and Louisiana will experience trouble with flooding. These storms are devastating for coastal areas and especially areas in the Caribbean where people there do not have insurance or the ability to recover from these disasters. Regions with hurricanes and typhoons will be very susceptible because seasons will be longer and the warmer air will provide more fuel for more devastating storms (Climate Change: Regional impacts). Increases in storms will also create problems with flooding and drought in areas of South Asia. As rainfall patterns change due to rising temperatures created by climate change, much of South Asia is getting drier

in general. In one case irregular rain patterns ended up causing “heavy rainfall that can result in widespread flooding, as was the case in Pakistan in 2010 when 20 million people were affected by flooding, and over 2000 were killed”(Pulsipher, 347). Abnormalities in rainfall have harsh consequences in this region. Much like in the region of the Caribbean, these areas will experience an increase in hurricane and monsoon frequency. They will have to deal with flooding issues that go along with this. Storms are beginning to increase in strength as well. In 2019, the region of Sub-Saharan Africa experienced a huge storm; “Tropical Cyclone Idai was among the most destructive tropical cyclones ever recorded in the southern hemisphere, resulting in hundreds of casualties and hundreds of thousands of displaced”(Climate Change is an Increasing Threat to Africa). Across regions that experience intense tropical storms, climate change is only making people suffer and lose more. The threat of these storms makes these regions extremely vulnerable and harder to live in. Another change that interrelates to regions in this area is drought. It is projected that “between 75 and 250 million people are projected to be vulnerable to drought and lack of drinking water”(Climate Change: Regional Impacts). People are beginning to experience more and more of this scarcity every day. In many regions of Africa, water is already a scarce commodity. Climate change will only worsen this situation and continue to lead to desertification in places like the Sahel. There is another major water crisis happening in South Asia due to glacial melting. This crisis is initially causing more flooding, but as temperatures rise, over time, “smaller glaciers will provide less water each year to rivers and to recharge the ancient aquifers beneath the heavily populated Indo-Gangetic Plain south of the Himalayan Range”(Pulsipher, 349). This leaves much of India's agricultural regions susceptible to water shortages. India's major cities are susceptible to drinking water shortages because receding glaciers ultimately lead to southern Asian rivers running dry in the winter dry season.

Drought and water shortages have extreme consequences for areas in Africa and Southern Asia where there are many struggling to survive already. Climate change will affect the less fortunate in areas between the 30 degrees north and south parallel. The most susceptible are the farmers and cultivators as well as other poor people struggling already.

While climate change vulnerability is closely tied to geographical location across the globe, poverty is also a major contributor. Third-world countries are most vulnerable as their populations generally consist of impoverished people with livelihoods attached to farming or harvesting other raw materials. In places such as Africa, farmers' livelihoods are at stake. Poor farmers in Africa will experience a reduction in “mean yield of 13% is projected in West and Central Africa, 11% in North Africa, and 8% in East and Southern Africa”(Climate Change is an Increasing Threat to Africa). Many people that depend on agriculture will find that they can no longer farm. In much of Africa, the GNI per capita purchasing power parity doesn't reach above 10,000 U.S. dollars (Pulsipher, 312). Compared to developed countries, commodity-dependent Africa is stuck in poverty and very susceptible to change in climate because they have minimal ability to deal with climate change issues. Poverty in these countries comes from the relationship these countries have with exports. In eight countries, one export accounts for more than seventy percent of exports(Sainsbury). Stress is already put on these regions with food insecurity, decreased crop yield, and drought. Because they are reliant on few commodities, income is very unequal and many often live in poverty and cannot cope with climate change. In more developed countries like India, farmers will lose their livelihoods in the future as climate change dries up glaciers that supply the water for agriculture. These poor farmers will be most vulnerable and will be forced into crowded cities living in poverty.

The third factor related to climate change susceptibility is inadequate governments and their lack of preparedness for changes as well as their extraction of raw materials. In governments in South and Central America where regulation of deforestation is lacking, rainforests are diminishing at alarming rates as a result of agricultural purposes such as soybeans, cattle, and palm oil. The forest is destroyed for the extraction of raw materials and profit. As the earth's metaphorical lungs are destroyed, climate change worsens because the rainforest sequesters carbon dioxide during photosynthesis. Brazil has previously enacted legislation on preserving the rainforest, but when economic growth stalled, they returned to higher levels of deforestation (Pulsipher, 124). As this happens Brazil becomes more susceptible to climate change. In the Caribbean, places like Haiti have struggled due to extreme poverty and corruption. While Haiti receives enough water to supply its people, uneven management creates a disparity where only 64 percent of the population of Haiti has access to clean water (Pulsipher, 124). Government corruption and inadequate management make the people of Haiti vulnerable to droughts and water issues. An increase in hurricanes brought about by climate change exposes their infrastructure, transportation, and water systems. Recovery takes them years and they rely heavily on humanitarian aid. Across the world, these same problems exist especially in Papua New Guinea where foreign-owned mining companies decimated the forests and polluted the river systems. Because the area was undeveloped, the companies took advantage of nonexistent environmental laws and many natives lost their livelihoods and were forced to work in the mines as their forests and ecosystems perished. The last example is South Sudan. The government of South Sudan is extremely weak and volatile to climate change due to its instability and conflict. Sudan's Civil War only hurts its ability to combat because they are not focusing any capital towards combating climate change. The country is highly dependent on climate-vulnerable

sectors such as agriculture, fisheries, and forestry resources. Unfortunately, “seasonal streams are beginning to dry up, affecting fishing communities in several parts of the country. Drier weather spells are also likely to be an underlying driver of increased deforestation and resource-based conflicts”(Stalon). Sudan's government is ill-equipped to deal with this and the people will be in serious trouble. Because their government is weak and has little ability to help its people they become more vulnerable. This can be seen across the globe in developing countries where conflict or corruption is common.

A relationship exists where the middle parts of the earth will suffer more severely from climate change than other parts due to a lack of governance and widespread poverty. Flooding and drought in this region will occur more as seasonal patterns will change. Also, an increase in severe storms will bring about more destruction. Many of these places have high poverty levels due to their reliance on commodity exports. Inequality in more developed regions also plays a role as the poor or vulnerable are often neglected by governments. Evidence points out that weak governments also have little ability to prevent climate change and cannot provide aid to victims of natural disasters. Even climate change has an unbalanced scale as Impoverished people are the most vulnerable to these changes. Third-world and developing countries will take the brunt of climate change while they are far from the major contributors to global greenhouse gas emissions. Leading governments need to stop being selfish and realize that action is vital for the health of the planet. The world needs to make strides towards a green society for the betterment of the global community before it's too late.

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