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Felicia Bedford
Duquesne University

DuQuark

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By Felicia Bedford
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Dear Reader,

The saga continues. Into the Depths returns with another harrowing tale of climate justice. In the last article, we discussed the ever-changing climate and disastrous monsoons of Asia. This time, we journey to the hot deserts of Africa where I intend to explore exactly what is happening here. As always, stay tuned for the next segment of Into the Depths!

Libya:

Although this journey is perilous and has shown great sorrows in regard to the world's climate, there is still much left to do. Today, I have ventured to the countries of Africa. This climate is unlike any of the ones previously experienced. The mountainous sand dunes and lack of water consumes my thoughts, and the sweltering air makes me panic slightly for lack of drink.

I begin this journey in the country of Libya, where increasing temperatures have brought great change in the last decade. Although the typical ecosystem here is desert, the increase in temperature has depleted underground water stores (Bindra). Another great impact on the ecosystem due to the heat is the changes in vegetation and flora. Although this ecosystem is made up primarily of sand and rocks, there are some rather beautiful plants I have seen since arriving. The most intriguing is by far the

pomegranate blossom with its explosion of pinkish-orange petals escaping from the stem. The surrounding branches bear the large fruit. I have come to find that this is actually the national flower here. I smile as the sweet aroma fills my nose. These flowers, as well as many other plants, are at great risk for extinction due to the heat. Research from the University of Tîrgu Mureş notes that Libya has at least 41 endangered plant species (Bindra).

In the same regard, another source notes the lack of understanding about plants in this region (Saaed). This comprehension is the groundwork that must occur in order to successfully revive this land and help the plants that are endangered here. I hope that I can help the people of Libya learn about the effects of climate change and understand why they are seeing such great change in their plants and temperatures. At present, Libyanshave more pressing dangers of war and dislocation. If only they knew the climate crisis poses an imminent threat to their complete way of life.

Ghana:

From Libya, I made the journey to Ghana, a country with beautiful pops of color and hidden metropolises. One can even spot palm trees on the major walks. The people here prove to be incredibly hard workers, carrying heavy loads in the sweltering heat. With this increased population, the effects of a failing climate are more easily recognized. In this region, it is the farmers who make up a vast amount of the population, and with a great knowledge of the land, they are the primary interest of many studies (Yaro).

Because of this increased level of studies on farmers, it has been shown that they have faced a great impact due to climate change (Fosu-Mensah). A study conducted in the region showed that 92% of the farmers interviewed have witnessed an increased temperature, while 87% witnessed decreased precipitation (Fosu-Mensah). This greatly impacts the farming region, and farmers are attempting to adapt in order to maintain their crops.

The Department of Economics in Ghana also conducted a study to see how climate change is impacting money and consumerism in the region. This study projects that the increase in temperatures will have effects on the ocean and fishing practices. Desertification is also expected to increase at a rate of 20,000 hectares per annum (Asante).

This country is dependent on its farmers, and they have been pioneering the research being conducted here on climate. Farmers have been an invaluable resource in research, and they provide invaluable food for the country as well. It has been an honor getting to know them.

Botswana:

The final step of my African journey is to travel south, nearly to the tip of the continent. In Botswana, elephants freely roam and trees poke up out of the red sand. There are also a great deal more waterways visible. I hope to illuminate what is happening here as well as the other African countries we have already explored.

One study conducted with the University of Botswana showed the two main crops of this country, maize and sorghum, are expected to have a decline in yield at a rate of 36% and 31 % over the next several decades, respectively (Chipanshi). This study takes account of the expected increase in temperature as well as the high evaporation rates and lack of water (Chipanshi). In addition, it was noted that changes to the plants spatially are occurring due to increased temperature (Jonnson). Thus, the soil and the plants themselves are undergoing great change due to the changing climate.

In addition to these uncertain climate conditions, it has been noted that the rainfall patterns in this area are incredibly unpredictable (Batisani). Although semi-arid climates such as Botswana always vary greatly in their yearly rainfall, it has been discovered that new climate stressors are having serious implications on farming communities. It has also been noted that to help these people, policy needs to be adapted by the government to regulate the response to these environmental changes (Batisant).

Reflection:

Overall, the people here have been incredibly gracious, welcoming, and incredibly joyful. Their culture is rich with tradition andI am honored they have welcomed me. After uncovering the great changes that are occurring here, I can see how these changes impact the economy and the livelihood of these people, especially the farmers. They are the ones that predominate the market here. In the last leg of this journey, I head back to my home in North America. There, I will explore the countries

within it, and compile all of this data to show how each continent I have visited is changing. I hope that, after showing the research, people may begin to believe in these devastating changes.

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