**Mine Your Business:**
Measuring the Environmental Impact of Industrial Activities in Africa

**RESEARCH QUESTIONS**

What are the relationships between human activity and environmental degradation in Sub-Saharan Africa?

Are there any potential associated links between these activities and the rise of climate-related disasters?

**INTRODUCTION**

Considering major climate disasters to occur on the African continent in recent years, it is highly necessary to critically evaluate the links between climate change and activities that worsen the human impact of climate change. Taking into account the deadliness of too much or too little precipitation, this map series aims to illustrate the components that worsen the effects of long droughts or flooding, like loss of vegetation through agriculture and mining activities.

**SPATIAL ANALYSIS METHODS**


2. Combine the layers that are on the same scale to create two new 'summary' rasters: one for agricultural activity, and another for mapping climate.

3. Combining the mine distribution raster and the newly created agricultural activity raster, I used raster calculator to combine the two into a ‘Human Impact’ raster - which represents human activity that can be detrimental to human and ecosystem health when engaged in intensively.

4. Zonal statistics were used to understand the extent of human activity by country.

**Results:**

As displayed on the maps, climate risks do not entirely align with high rates of human activity, however, there is strong clustering of human activity in West, East, and South-eastern Africa. Namely, the countries with the highest levels of human industrial activity (both agricultural and mining) are Swazini, Zimbabwe, Uganda, and Nigeria.

**Discussion, Limitations, and Conclusions:**

Considering the continent’s extensive relationship between resource extraction and colonialism, it is interesting to see how stakes in mining concessions are multinational corporations that are not based in Africa. Overall, previous research on this subject focuses on conflict that accompanies intensive resource extraction, also known as, ‘the resource curse’. In countries that struggle with political instability, the distribution of revenue from mining and large agricultural operations can be especially contentious, and can lead to a lack of regard for environmental issues that are deemed as less urgent. In the long run, such an attitude can lead to massive losses of life, particularly in regions that are already feeling the effects of climate change.