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Final Write Up - LSE Phelan UGRA
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Throughout this academic year, I have had the honour of working alongside Dr. Rebecca Elliott on a project regarding coastal communities, flood risk, and infrastructure. The project I joined has been ongoing for several years, having initially set out to explore why so many individuals refuse to leave their coastal communities despite the immense risks posed by flooding and sea level rise. This tendency to remain in an area despite the risks to one's own safety and property (or *"an often-implicit commitment to preserving present arrangements of people and property"*) has been termed 'incumbency' by Dr. Elliott. Understanding incumbency may be a key component of learning how to build flood infrastructure that best serves the communities it seeks to protect.

Methods

A significant portion of my work on this project involved updating a large census consisting of flood infrastructure projects in planning, design, and construction phases across the coastal United States. This census was originally populated by a research assistant several years prior, but was now in need of updating. In order to update the census with the most recent developments within each of these projects, I engaged in an immense amount of secondary literature review, reading through a variety of reports from government pages, independent contractors, and local news reporting. From the census work, it became clear that an interesting case study was arising within the city of Charleston, South Carolina, one of the fastest sinking cities in the continental United States.

From that point onward, we focused far more explicitly on the case of Charleston, a city where there are a large number of flood infrastructure projects occurring at any given time due to its near constant flooding throughout the year. However, despite the ubiquity of these projects, the information published to the public on them is often quite dispersed and difficult to find. The primary challenge within this work lay within determining which projects were simply prospective ideas, which projects were ongoing, and which projects had been abandoned or renamed. Often, there were long periods of time with no consistent updates, which created the need to consult a variety of different platforms in order to piece together a single narrative. I dedicated a majority of my time to compiling the

various Charleston flood projects, and working to determine what stage of the infrastructure process they were in, how they were funded, and what communities they sought to protect.

In order to help keep track of and illustrate the locations of these projects more effectively, I created an ArcGIS map consisting of the most prominent projects currently under work. This mapping helped to determine whereabouts within the city these projects were most concentrated, as well as what communities were perceived to be in most urgent need of protection from flooding. Compared to other coastal cities that have been primarily focusing on *resilient* infrastructure projects (building parks and structures that can withstand or avoid flood waters), Charleston has focused primarily on *protective* infrastructure projects designed to keep water out or remove water from the existing structures, often through walls and pumps. This trend has likely emerged due to the elevated pressure Charleston is under to deal with floods in the present instead of the future, as it faces far more regular and intense flooding than most other cities.

Further Considerations

As we studied Charleston, we came across multiple different variables we wanted to examine further in order to understand Charleston's current approach to flood infrastructure, including the following:

1. *The Dutch Dialogues*

Particularly of interest were a series of conversations held between the Netherlands and Charleston in regards to how to combat flood risk. These conversations, known collectively as the "Dutch Dialogues," laid out a framework for the city of Charleston regarding what flood protection strategies and types of protective infrastructure they should implement going forward. These conversations are cited with considerable frequency within discussions of Charleston's current plans, having shaped the city's approach to infrastructure.

2. *Federal Funding*

Over the past four years under the Biden Administration, there has been a considerable influx in federal funds allocated to states for climate related purposes. We began examining the funding efforts of the American Rescue Plan, the Inflation Reduction Act, and the Bipartisan Infrastructure Law in particular in order to determine how these sudden new available federal funds were being used within Charleston.

3. *Historical Identity/Property Value*

Another reason why we chose to focus on Charleston in particular, besides its outsized level of flood risk, was its historical context and plethora of colonial properties. These historic properties are crucial to Charleston's prosperity, as they drive the tourism industry within the city. Therefore, Charleston has an increased incentive to protect its existing structures at all costs from flood damage, as the costs of historic destruction are not only personal but distinctly tangible.

Conclusion

While this project is far from over, we have begun shifting focus to piecing together a fuller picture through primary sources. Most recently, we have begun gathering a list of potential interviewees currently living and working in Charleston. These individuals may help clue us in to the more intricate details of the progress of flood infrastructure projects, and we ultimately hope to host a number of conversations with local residents and experts in order to formulate a more complete understanding of the area.

Working alongside Dr. Elliott has not only grown my knowledge of US climate policy, but has also allowed me to gain immense confidence as a researcher. Her previous work and guidance inspired me to embark upon my own research project focused on the racial geographies of flood infrastructure plans in the coastal United States, which I had the opportunity to present at the 2024 British Conference of Undergraduate Research. I hope to continue doing climate work in the future, and this experience has been truly invaluable within my pursuits towards that goal. I am so grateful to have been a part of this project, and cannot wait to see where it goes in the future.