Sea Level Rise - Regional Data & Data Visualization

**PART 1: Regional Sea Level Projections**

[NASA Sea Level Projection Tool](https://sealevel.nasa.gov/ipcc-ar6-sea-level-projection-tool) provides comprehensive regional sea level projections. This includes projections by decade based on the IPCC 6th Assessment Report and includes information about how various processes contribute to sea level rise.

1. Navigate to a station located in **Maine** and answer the following questions:
   1. How much will sea level rise in Seattle over the next century?
   2. Make a table or graph to show the relative contribution of each “process” listed on the sea level projection tool to show their relative contribution in 2020
   3. Compare how the contribution of each “process” changes over the next century. (you can show this visually through a table, graph, or line plot)
   4. What is the primary contributor to sea level rise at this location? Why do you think it is this contributor rather than others?
2. Navigate to a station in the **Southern Hemisphere** (choose somewhere in Southern South America, southern Africa, Australia or New Zealand) and answer the following questions:
   1. How much will sea level rise at this location over the next century?
   2. Make a table or graph to show the relative contribution of each “process” listed on the sea level projection tool to show their relative contribution to sea level rise in 2020
   3. Compare how the contribution of each “process” changes over the next century. (you can show this visually through a table, graph, or line plot)
   4. What is the primary contributor to sea level rise at this location? Why do you think it is this contributor rather than others?
3. Navigate to a station in the **Juneau, Alaska** and answer the following questions:
   1. How much will sea level rise at this location over the next century?
   2. Make a table or graph to show the relative contribution of each “process” listed on the sea level projection tool to show their relative contribution to sea level rise in 2020
   3. Compare how the contribution of each “process” changes over the next century. (you can show this visually through a table, graph, or line plot)
   4. What is the primary contributor to sea level rise at this location? Why do you think it is this contributor rather than others?

**PART 2: Comprehensive Data Visualization**

1. Create a table, chart, or graph to visually display the differences in sea level rise between the three locations above. You can do this using any means of your choice. (See ***Example Google Sheet*** or ***Example Jupyter Notebook*** if you need help)
2. Combine your visual data displays from Part 1 and Part 2 into a powerpoint or slide deck.
3. Why do you think there are differences in sea level rise between these locations?
4. Is there a difference in primary contributors to sea level rise between these locations? If so, can you explain why?

**PART 3: Comprehensive Data Visualization + Reflection**

1. Create a table, chart, or graph to visually display the differences in regional sea level rise and the differences between the three locations investigated in part 1. You can do this using any means of your choice.
2. Why do you think there are differences in sea level rise between these locations?
3. Is there a difference in primary contributors to sea level rise between these locations? How can you explain this?
4. Can you create a visual to show how glacier melt in Alaska will affect regional sea level rise in various locations around the world over the next 100 years?