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CAC

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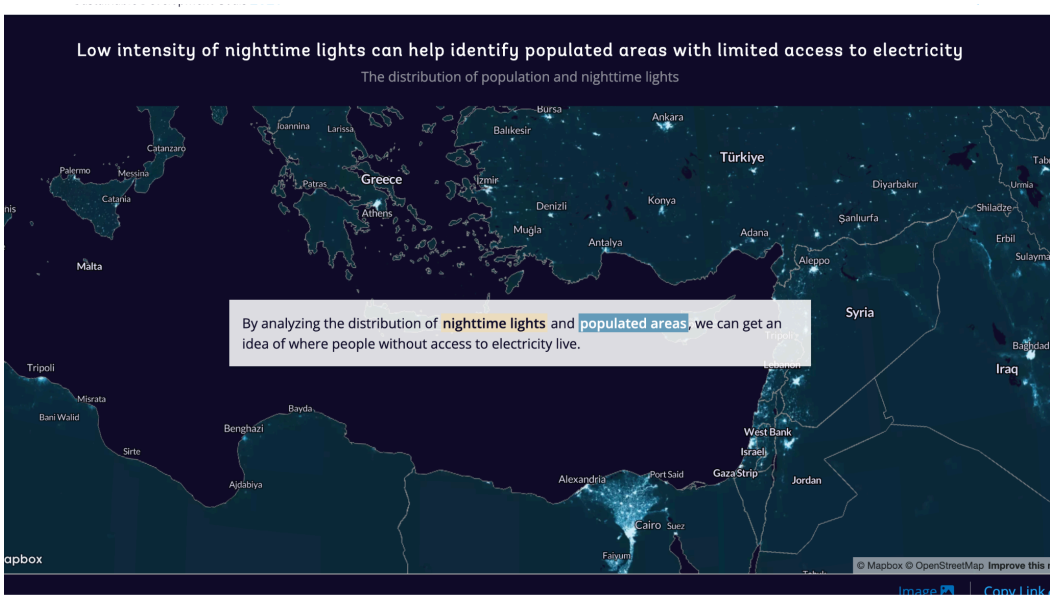
Project B Pre-Work

A. How fast is the global access to electricity growing? **Slowly, it is only going to increase by 1% in the next decade.**
B. Which regions saw the largest growth in access to electricity? **South Asia has grown the fastest, going from 58% to 99% in the last two decades.**
C. How does living in the urban vs. rural areas correlate to access to electricity? **Rural areas contain 80% of the world's population without electricity.**
D. Which data is used to gain insights on where people without access to electricity live? **Nighttime lights viewed through satellite images are one of the main ways to gain insights into electricity access.**
E. How does MTF improve the quality of access to electricity in a household? **MTF measures the quality of access using a six-tier system. Tier 0 means no to little; Tier 1-2 means a household with essential lighting and some small appliances (not enough for a refrigerator); Tier 3-5 means a high level of access (8 hours or more) and can power high-load appliances. Tier 5 can power air conditioners, refrigerators, washing machines, etc.**
F. What is the environmental trade-off for higher-tier access to electricity? **The environmental trade-off is higher greenhouse gas emissions for higher-tier access to electricity, but renewable energy can help manage this trade-off.**
G. Which regions had the most environmentally sustainable efforts to increase access to electricity? Which regions had it the worst? **Latin America and the Caribbean had the most sustainable efforts, and East Asia and the Pacific had the least.**
H. Which is the fastest-growing renewable source of electrical energy in low-income countries? What should be considered when planning for this method of power generation? **Hydroelectric power is the fastest-growing renewable source of energy in low-income countries. The impact on surface water flows should be considered when implementing this power source.**
I. Was this presentation an effective storytelling with data? Why, or why not?

Nathan and I would say overall yes, but there were a few of graphs that were hard to read or could have been put in a more practical format. The first example of a graph that could have been different is the odd color pallet graph used for the "Low tier electricity access is concentrated in rural areas" graph. Nathan and I talked about it more

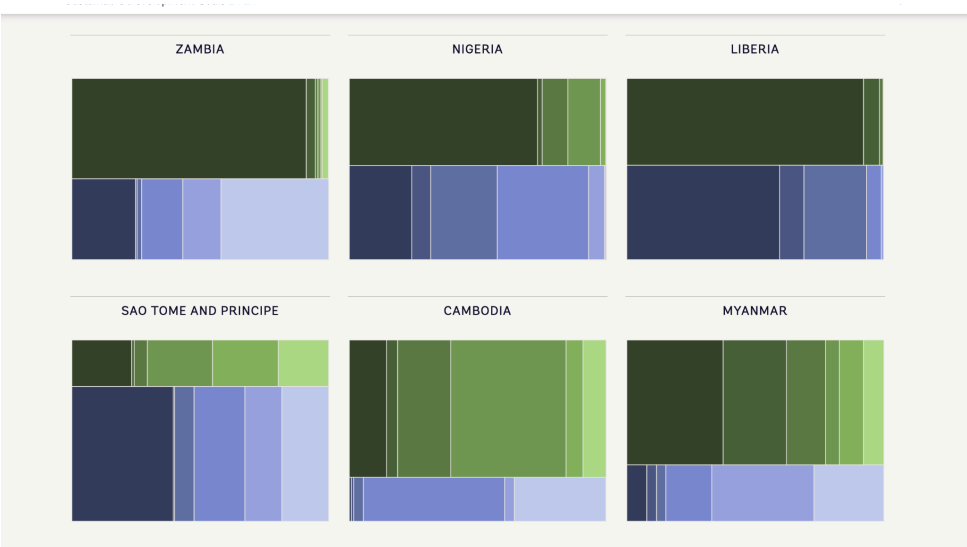
below in question K, but it would have been more easily communicated the disparities in a bar graph. Besides that other aspects of the presentation were very effective especially the graphics that guide a person through what the visual is trying to communicate. We were both able to learn and understand the disparities of access to electricity between different areas (regions, countries, urban vs. rural, ect) and also see how CO2 levels change as people get access to power.

J. Which data visualization from the presentation was most appealing to you? Insert a screenshot and explain why.



Elias and I found this graph appealing because it walked us through the story and showed us in a clear way how electricity does not always overlap with population distribution in different countries. We found it easy to follow, and that it had a low cognitive load.

K. Which data visualization from the presentation was least appealing to you? Insert a screenshot and explain why.



Elias and I found this graph to be the least appealing because it required more mental work to understand and we did not understand the story it was trying to tell very easily. It was simple to grasp the urban vs rural divide, but the inclusion of tiers and lack of labels made it difficult to grasp. We needed to hover over the graph for several seconds to understand what they were trying to convey. Clearer labeling (perhaps on the bars themselves) would have made these graphs easier to understand.