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## **Global Trends**

**Rising sea levels** are a result of the polar ice caps melting due to global warming and climate change.<sup>1</sup> The initial models predicted around 3 to 10ft of sea level rise, but we have routinely been exceeding these modeling expectations.<sup>1</sup> This is an issue that directly affects hundreds of millions of people, who live on the coastline, as it might force them out of their homes and/or increase morbidity and mortality for coastal dwellers.<sup>2</sup> The increased occurrence of other natural disasters, such as hurricanes, in populated areas, could result in even more displacement due to sea rise in coastal areas.<sup>1</sup> This issue also indirectly affects an unprecedented number of people. First, those whose livelihoods depend on agriculture, whose means of employment are endangered by sea level changes;<sup>1</sup> even if the fertile land is not completely underwater, it will be negatively impacted by saltwater intrusion.<sup>1</sup> While this issue already seems to affect a large population, it actually affects everyone in an indirect way. Rising sea levels will result in less food and clean water, exacerbating food insecurity and starvation issues that already exist.<sup>1</sup>

As noted, this issue is of the greatest importance because it affects everyone; people need food and clean water in order to survive. In order to combat this issue monetary resources are needed to build dams to prevent flood or build wind turbines as an alternative to harmful energy, which puts less developed nations at a disadvantage.<sup>2</sup> As a part of adaptation we would have to construct resilient dams (to prevent flooding), risers on buildings near the shore (to prevent damage), zoning changes to prevent new buildings from being built on the shore, and warning systems for effective evacuation.<sup>2</sup> As a part of mitigation we would have to build wind turbines to decrease carbon emissions and slow global warming, while also creating more open space in urban areas.<sup>2</sup> But of course, this would have to be an international effort. In the United States, while there has not been much effort to slow global warming, some states in the northeast have begun to incorporate climate change into their plans.<sup>3</sup> Island nations value this issue, and countries like the Maldives are creating plans and even contemplating mass migration to other countries.<sup>1</sup> The issue is that I cannot foresee states or nations who are not directly affected taking much action in regard to rising sea levels.

## References

<sup>1</sup>Bissel. "What Is a Catastrophe, and Why Is This Important?" *Preparedness and Response for Catastrophic Disasters*, 2013, 16–41. <u>https://doi.org/10.1201/b14921-6</u>.

<sup>2</sup> "Weather-Related Morbidity and Mortality - Climate and Human Health." National Institute of Environmental Health Sciences. U.S. Department of Health and Human Services, October 31, 2019.

https://www.niehs.nih.gov/research/programs/geh/climatechange/health\_impacts/weather\_related\_morbidity/index.cfm.

<sup>3</sup> GlobalChange.gov. US Global Change Research Program, https://www.globalchange.gov/.