

## Global Trends: Sea-Level Rise

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An alarming and important global trend to me personally is rising sea levels, especially what this means for my home state of Florida. Sea levels have been monitored since the late 1800's and are still being monitored today. The University of Hawaii Sea Level Center has estimated that sea levels have risen about 8.5 inches since 1880 mainly due to glaciers and ice sheets melting from an increase in greenhouse gases raising the global temperature. A third of the U.S. population lives in a coastal city and most big cities globally are also located near the coast. By 2100, sea levels are estimated to rise over one foot over 2000 levels. Rising sea levels will cover roads, bridges, inundate homes and cities and could lead to mass evacuations and deaths. These large cities will see their economy crumble which will have a domino-effect on other economies.<sup>1</sup> This is very important to me for these reasons but also because my home state of Florida is on the path to catastrophic damage, both to people's lives but also to industries and the flora and fauna unique to the region. Florida is at sea level and the ground is mostly porous limestone, meaning water can easily permeate the limestone and affect the water table as sea levels rise. Millions of people are at risk since our largest cities are on the coast, and we need to anticipate the drastic measures this will require.<sup>2</sup>

In Florida specifically it has often been proposed to build sea walls, but this is not feasible. We are unable to hold back rising sea levels with sea walls again because our ground is porous, and water can easily flow under the sea wall. For this reason, cities like Miami are drafting proposals for keeping the city from falling underwater. These plans however have been estimated to cost billions. Current plans include increasing stormwater pumps by more than double and building injection wells to carry the excess water deep below the surface. Avoiding paving additional land will help keep the soil exposed and able to absorb excess water. Policies have been enacted in the state to mitigate this disaster although much criticism has been given to the fact that Florida legislation has focused on the effects and not the cause of sea-level rise, the cause being global warming from human activities.<sup>2</sup> Around the world, sea walls are being built where appropriate and where they can be afforded, leaving many LMIC vulnerable. It is likely that more drastic measures aimed at reducing the cause of sea-level rise like reducing our carbon footprint will not be enacted until it is too late, proven by the fact that the world is nowhere near on track to reach the goals set out by the Paris Agreement. We would need to act drastically in the next few years and steps to do this have not been put in place.<sup>3</sup>

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