Climate change has become one of, if not the, most important challenges facing humanity. The impacts of rising temperatures can already be felt today and will inevitably affect many more factors such as increases in extreme weather events, species extinction, lower agricultural yields, spread of diseases and sea level rises. While the rise of sea levels is one of the most certain outcomes of increased global temperatures, the amount of sea-level rise is less certain. Under current business as usual scenarios, scientists’ estimates range between increases of 0.5—2 meters by the end of the century. This project analyzes the impact of a 2 meter sea level rise on the population of Bangladesh. The research question asks how many people would be affected by such a scenario and what type of land would be flooded. We find that at least 800,000 people currently live in the areas which would be affected, most of which are currently wetlands and agricultural land.

In order to answer this question, the first step required the creation of an inundation zone. Using data produced by the National Aeronautics and Space Administration (NASA), all areas which had an elevation lower than two meters were identified. Using estimated population data for 2020 by the Center for International Earth Science Information Network (CIESIN) it was then analyzed how many people are currently estimated to live within this area, which is expected to be flooded in scenarios predicting a 2 meter sea level rise. Additionally, it was calculated what type of land cover currently exists within the inundation area, in order to estimate how many square kilometers of each given class of land would be inundated.

The analysis has presented that around 800,000 people currently live in areas which are at risk of being flooded due to climate change. The urban area, in which most of these people live, represents only a small percentage of the area to be inundated.