

Final Project Report

Your Name (NetID)

Tue., Apr. 30

1 Introduction

1.1 Problem Statement

Clearly define the problem statement that your chosen feature aims to address. Explain the significance of this problem in the context of climate risk management.

Elevating a house is very costly and is the reason why this decision is put off into the future. With the help of grants, buildings are able to be elevated as needed in a proactive timeframe which prevents further damages.

Federal grants have been a crucial form of assistance for households living in areas prone to flooding, but there is lacking research into how these grants impact the cost-benefit ratio and how these funds are allocated.

After demonstrating the significance of an elevation construction grant to a homeowner or community, we found that these grants are more often allocated for wealthier homes/businesses. Many of these programs are required to go through larger communities before getting allotted to individuals which makes it even harder for marginalized communities/families to receive this form of funding.

1.2 Selected Feature

Describe the feature you have selected to add to the existing decision-support tool. Discuss how this feature relates to the problem statement and its potential to improve climate risk assessment.

Adding the grant as a percentage (75%) to the initial construction_cost in the first year for the FEMA FMA grant. Modify the state of the world (ex: subsidy parameter) Compare this for different house scenarios

For the post-flood damage grants, we could reduce the damage amount by 75% for the year with the most severe year of the 50 in terms of storms. Assume that if the house was flooded it's a major flood event Split construction cost into construction cost for the homeowner vs. government Compare npv for homeowner and government (who spends more)

2 Literature Review

Provide a brief overview of the theoretical background related to your chosen feature. Cite at least two relevant journal articles to support your approach (see [Quarto docs](#) for help with citations). Explain how these articles contribute to the justification of your selected feature.