Pushed to the Edge: A Socio-Environmental Analysis of Climate Gentrification along the East Coast of the United States

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Graduate Pursuits - Request for Proposals

Abstract: Climate change may contribute to gentrification and environmental injustice by creating and reinforcing new pathways of displacement in cities. As such, climate gentrification is a critically important socio-ecological systems problem that is currently under-studied despite its importance. This project aims to advance the scientific understanding of climate gentrification by combining geophysical and socioeconomic data to investigate how environmental stress in coastal communities in the East Coast of the United States may contribute to climate gentrification. In this project, we will identify how rates of coastal land erosion, flood histories, and projected sea-level rise correlate with socioeconomic community changes associated with gentrification. We will then combine economic, demographic, and environmental data to identify potential typologies of climate gentrification using unsupervised machine learning algorithms. Mapping these typologies will provide insights into which coastal communities may be at risk of experiencing enhanced climate gentrification in the future. After creating the map of gentrification vulnerability, we will select three case study cities in different typologies to conduct an in-depth comparison of city planning policies and coastal management practices that may exacerbate or reduce climate gentrification risks. This research will build the grounds for future researchers to look at how climate gentrification is influencing coastal communities and will help decision-makers to adopt more just and equitable policies.

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