

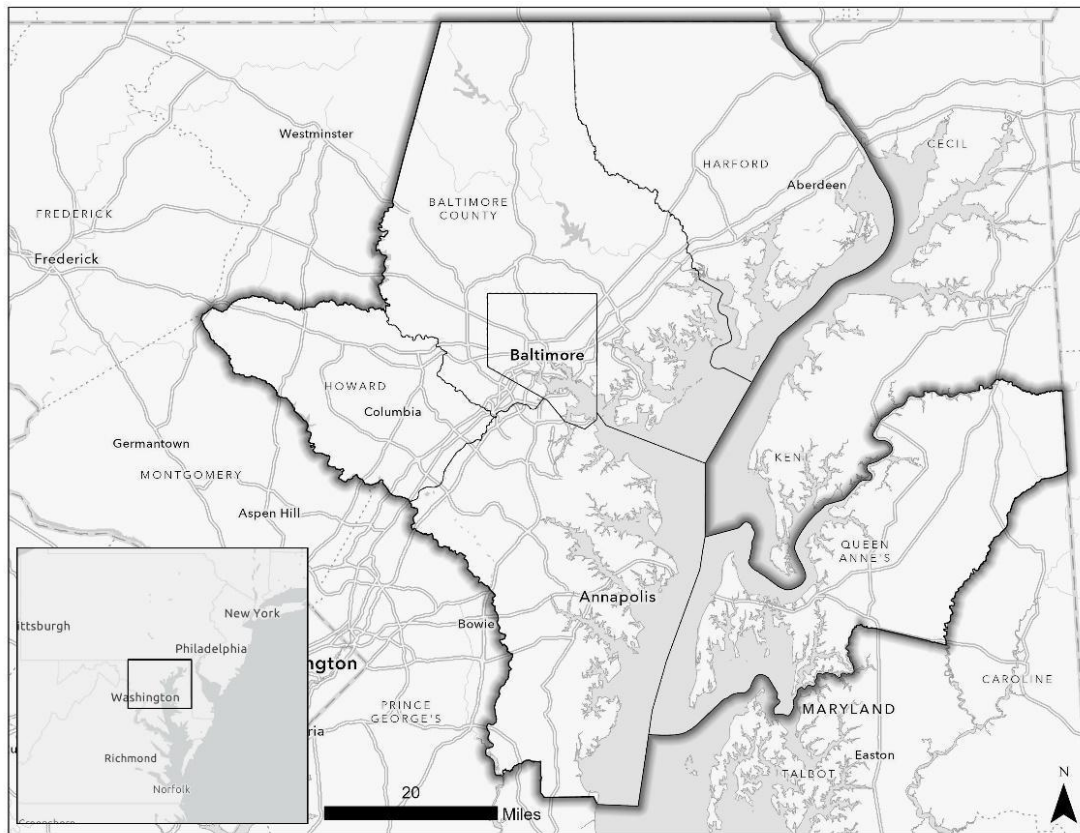
Baltimore Area Risk Assessment

9/18/2025

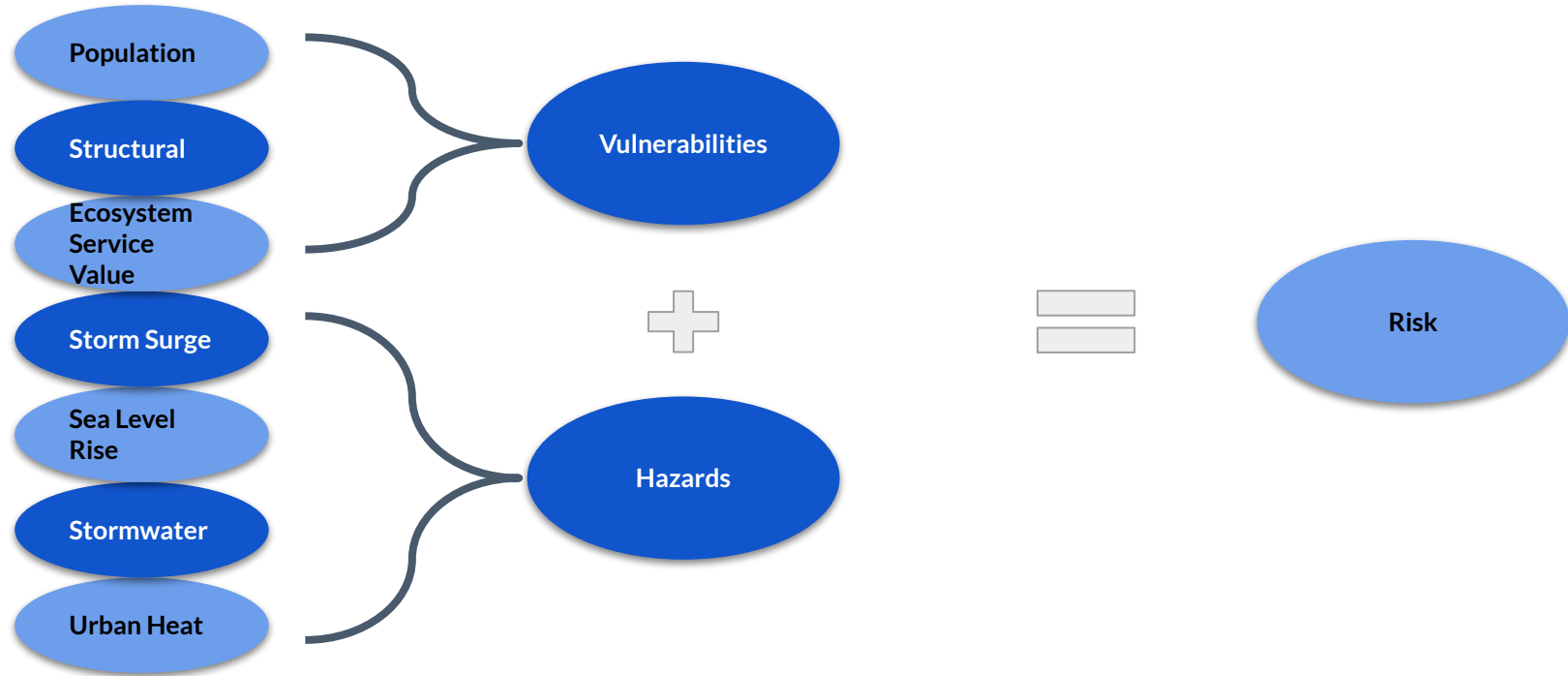
Amy Freitag, Seann Regan, Katie Auerswald, Bria Pope



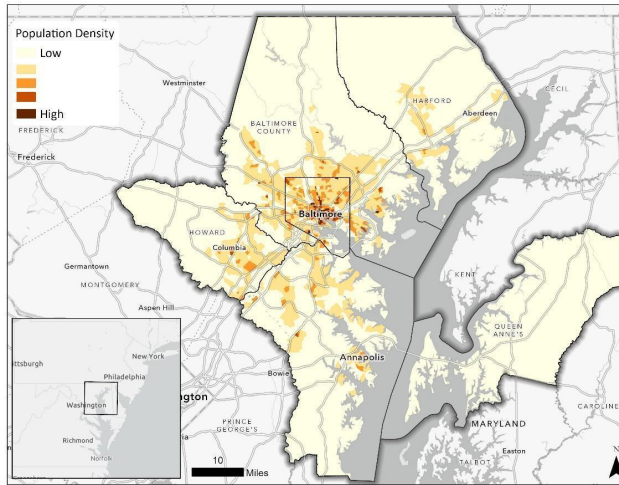
Project Scope & Geography



The Components of Climate Risk

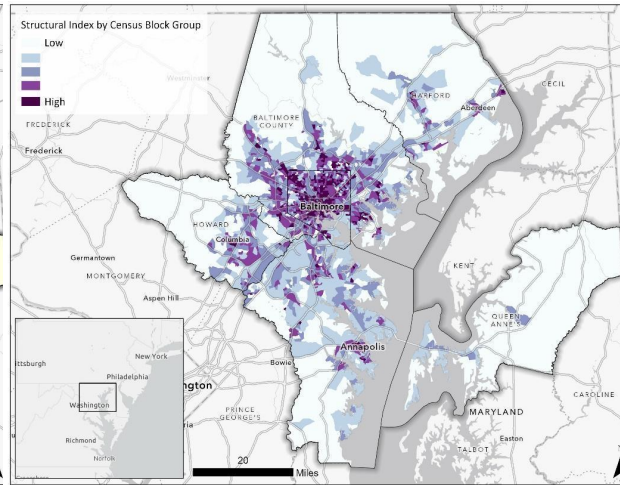


Vulnerabilities



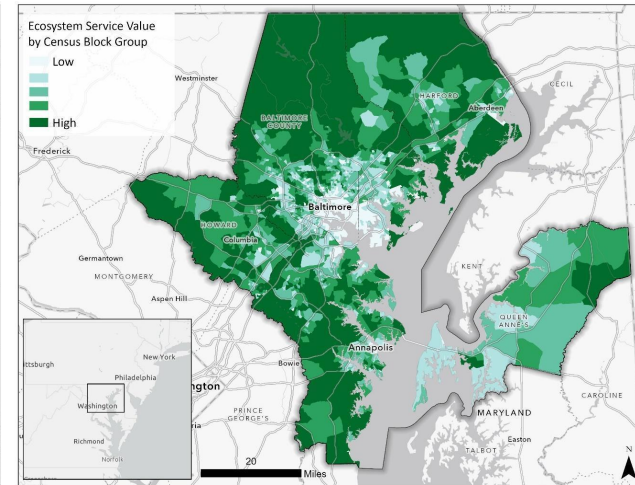
Population Density

Data: Baltimore
Metropolitan Council



Structural Index

Data: HIFLD, MD iMAP, ESRI



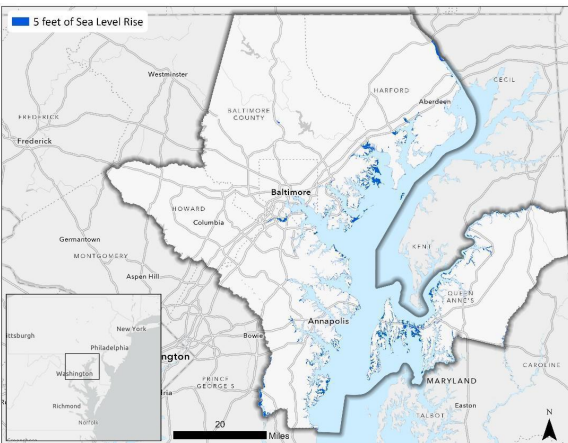
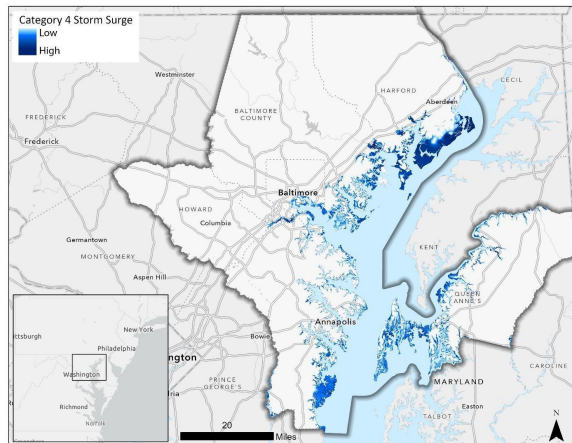
Ecosystem Service Value

Data: MD DNR

Hazards

Storm Surge

Data: NOAA MDL SLOSH model

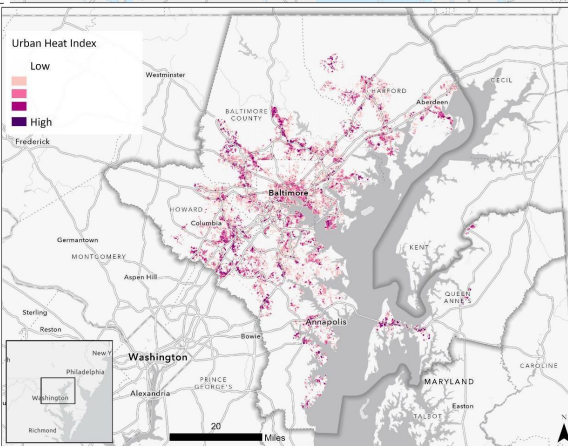
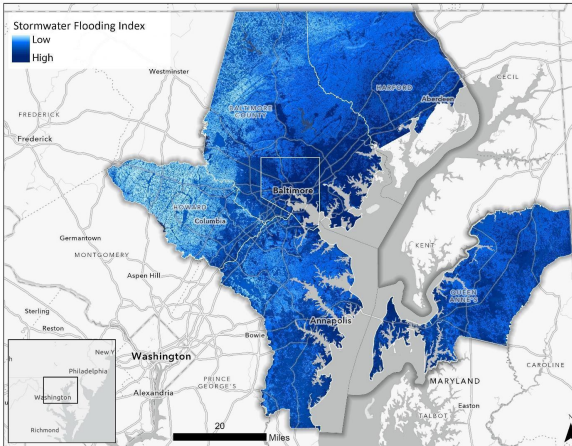


Sea Level Rise

Data: MCCC (Boesch et al 2023)

Stormwater Flooding

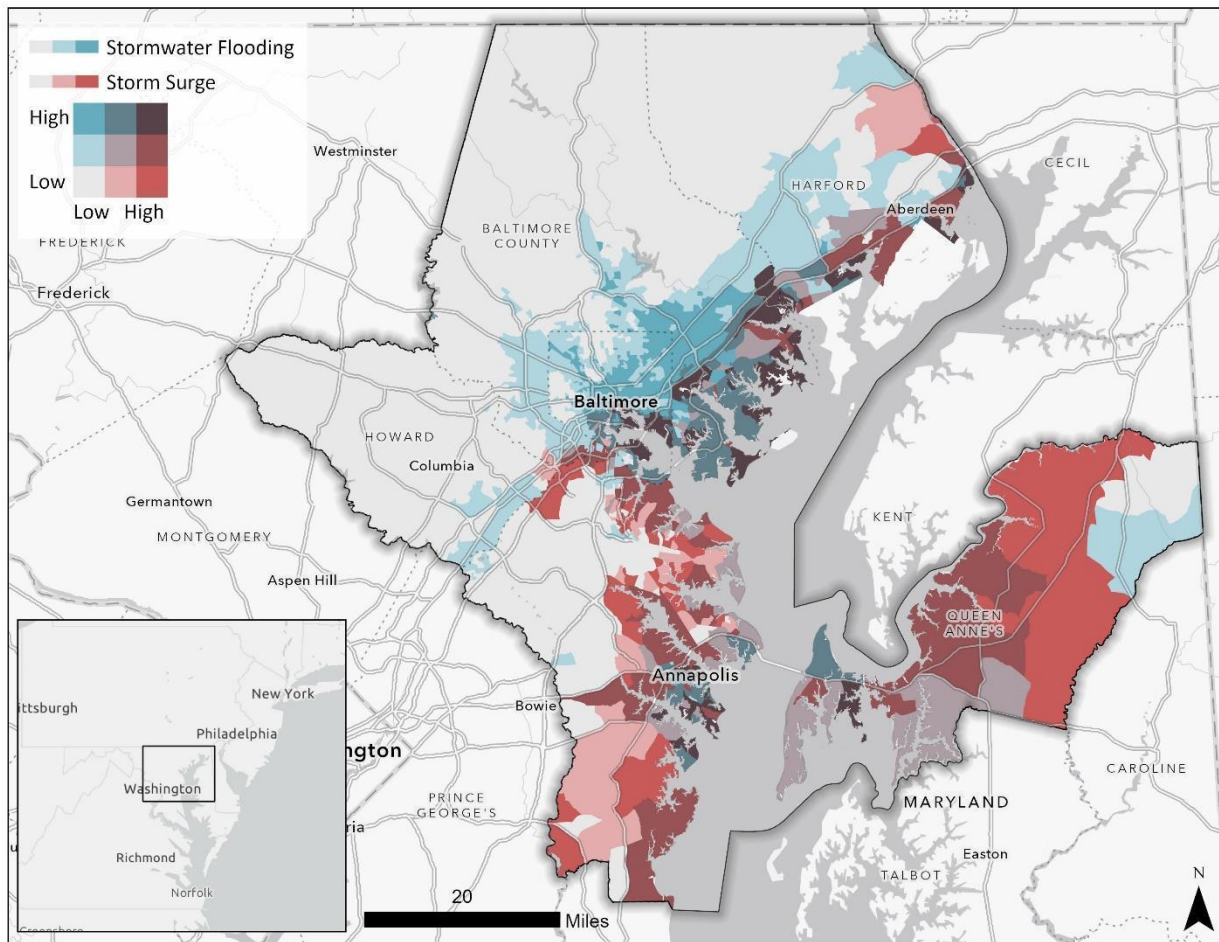
Methods: Kazakis et al 2015
Data: USGS, USDA, NOAA



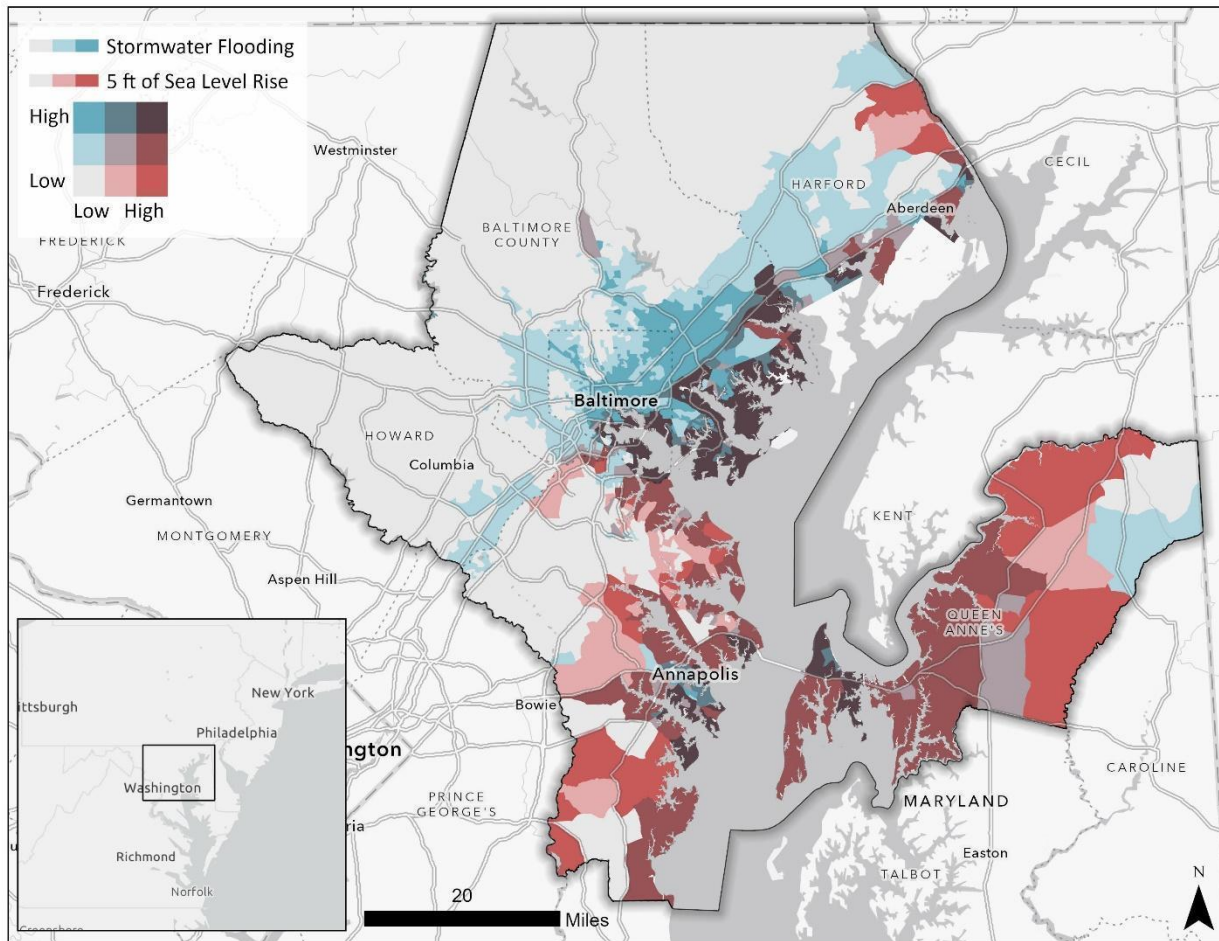
Urban Heat

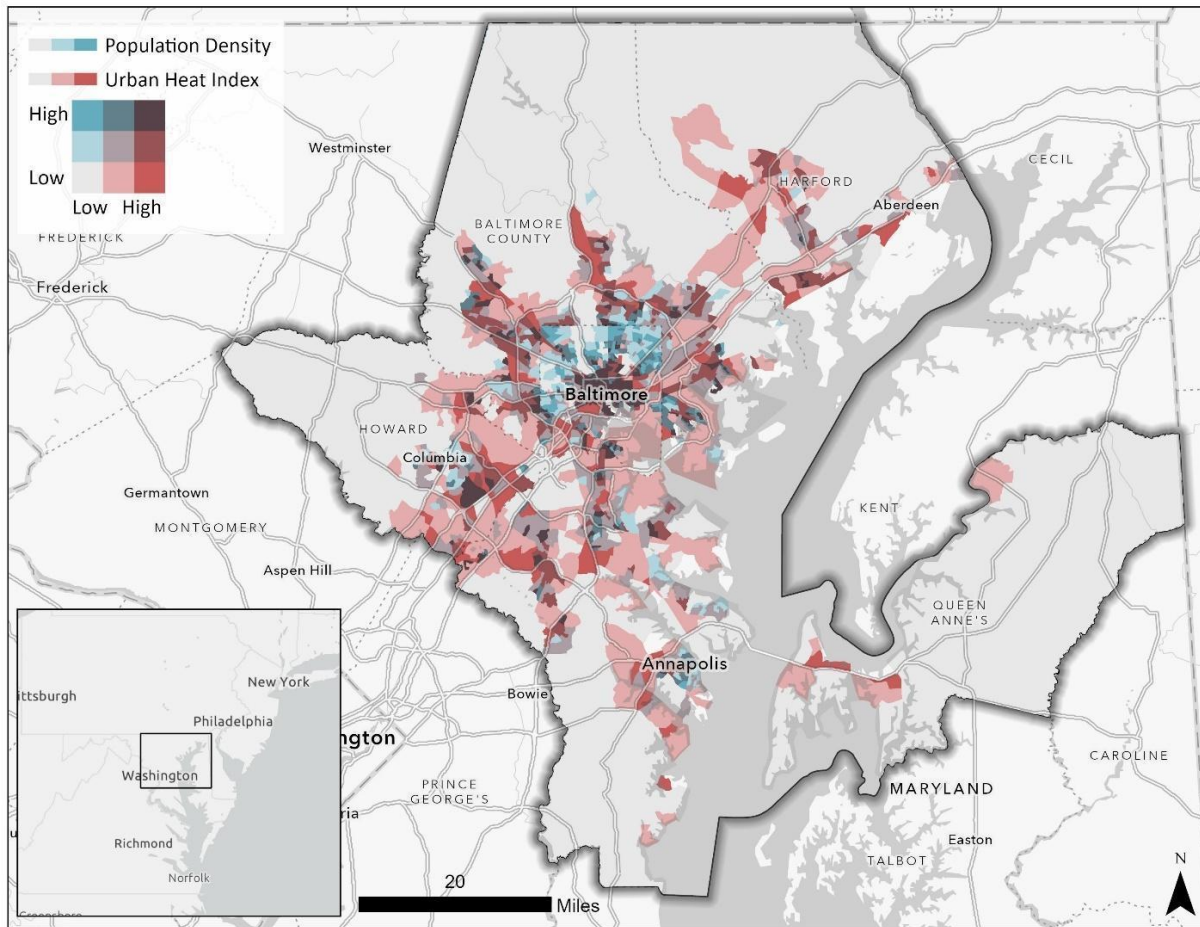
Data: USGS

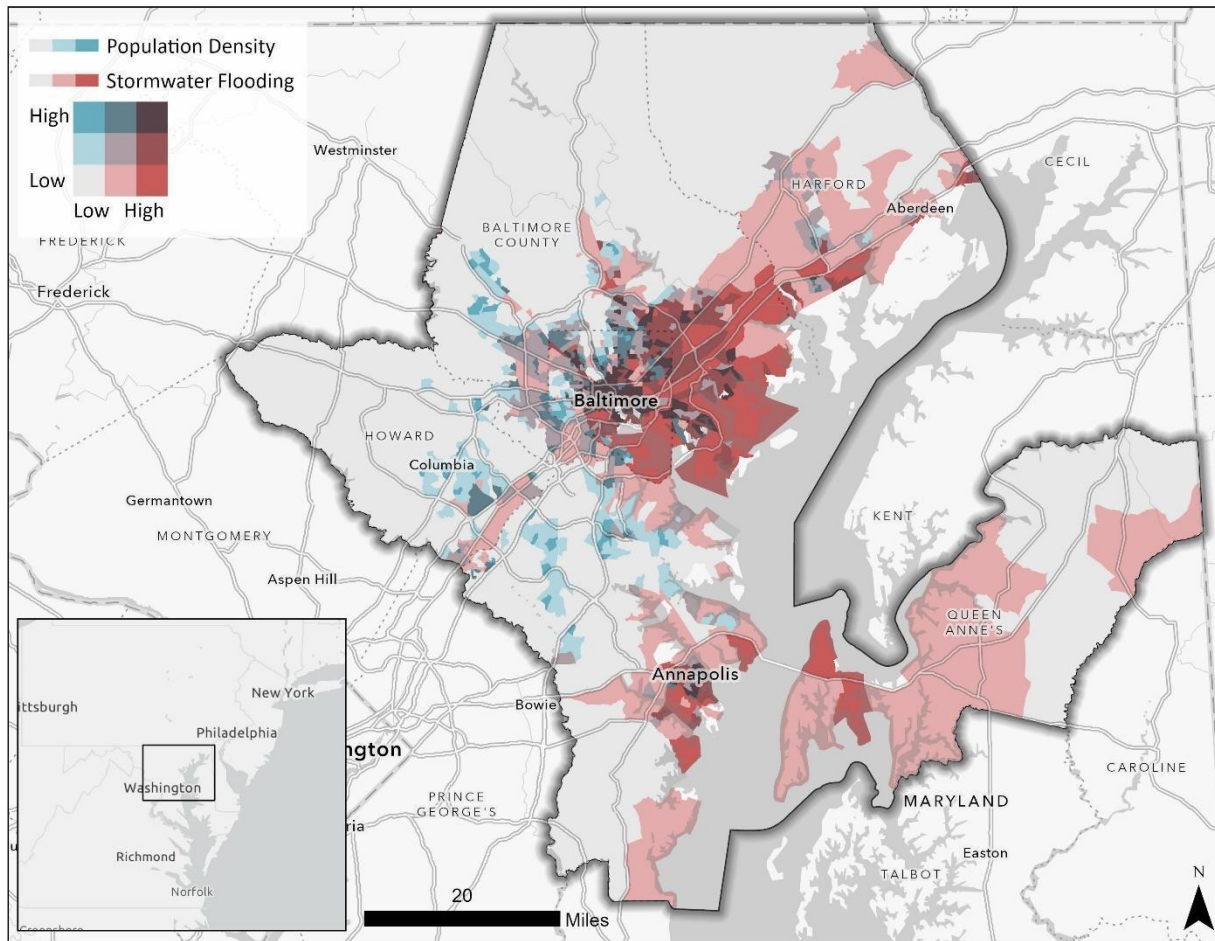
Bivariate: combined hazards

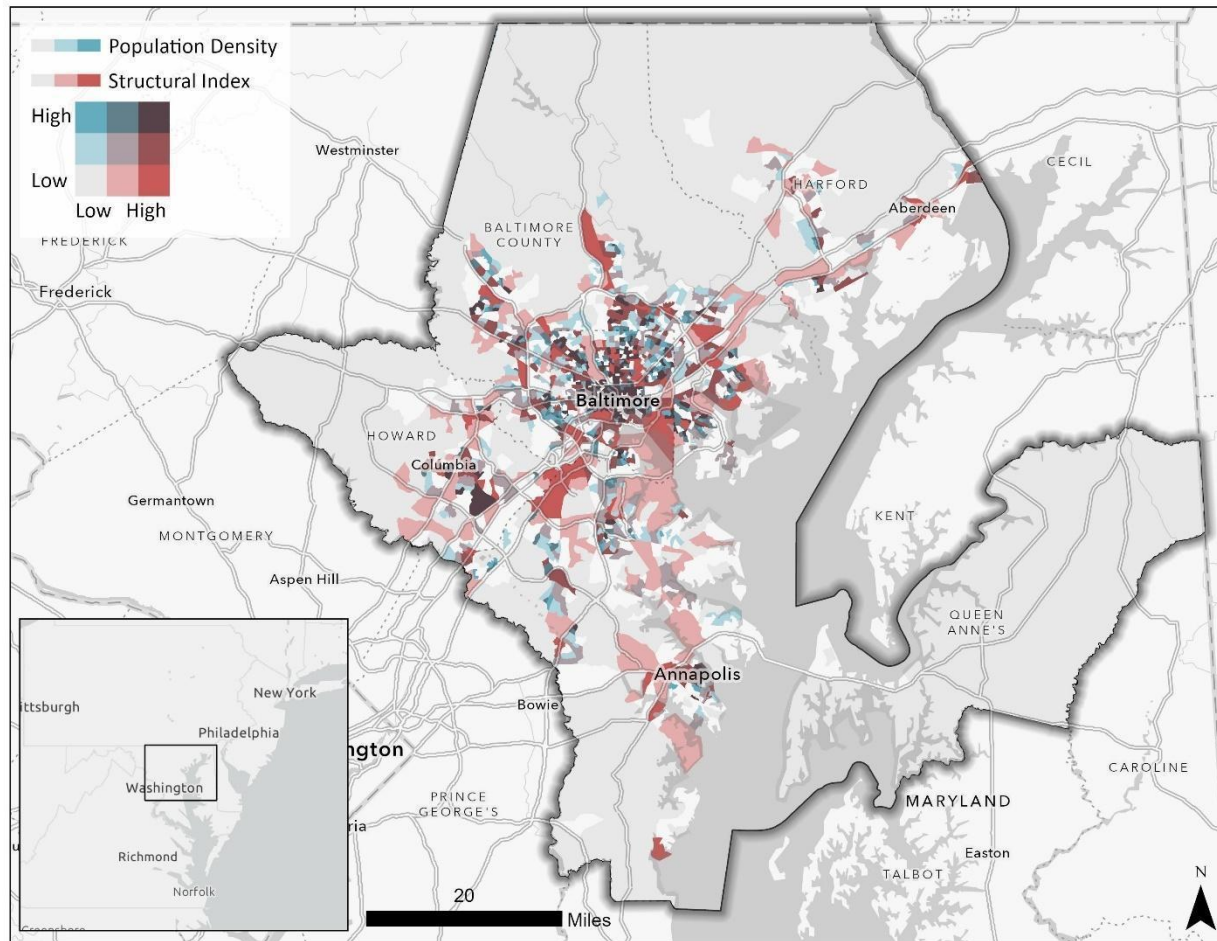


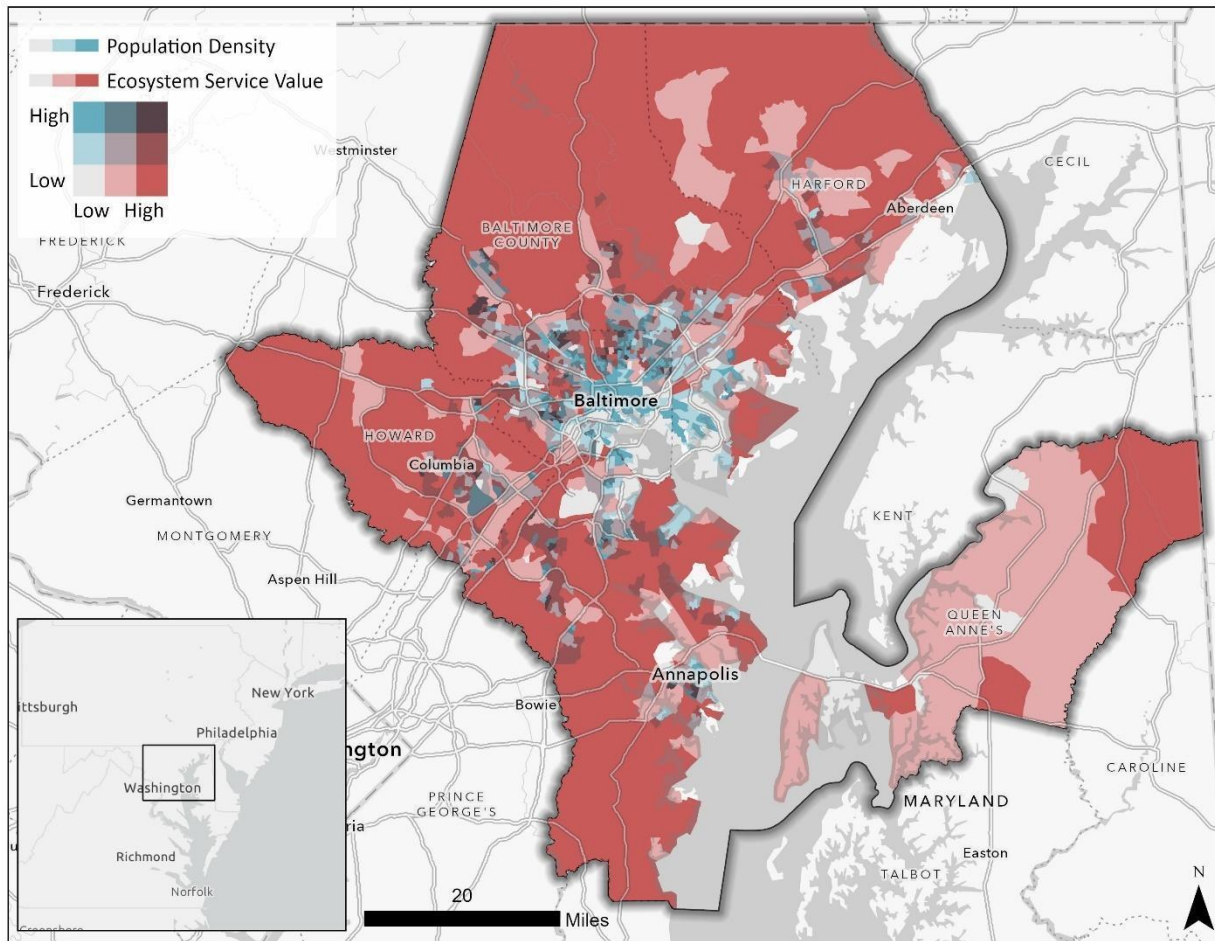
Bivariate: combined hazards





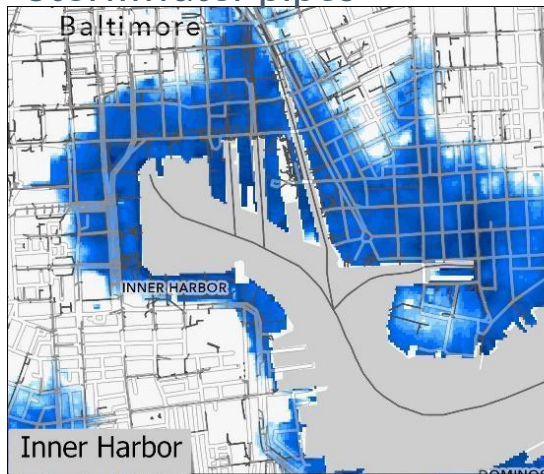




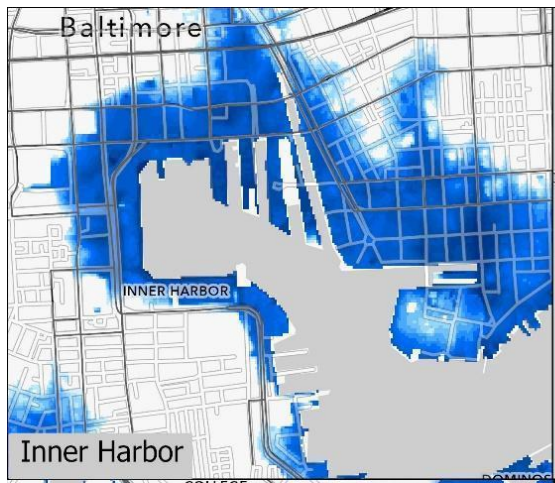


Storm Surge + Infrastructure

Stormwater pipes



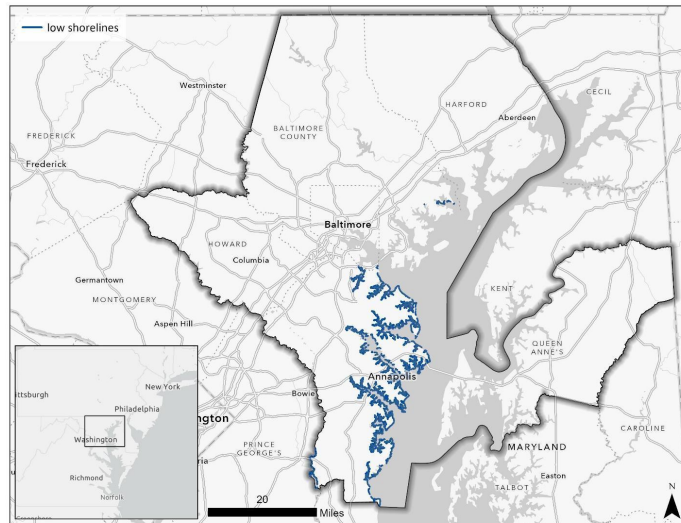
Roads

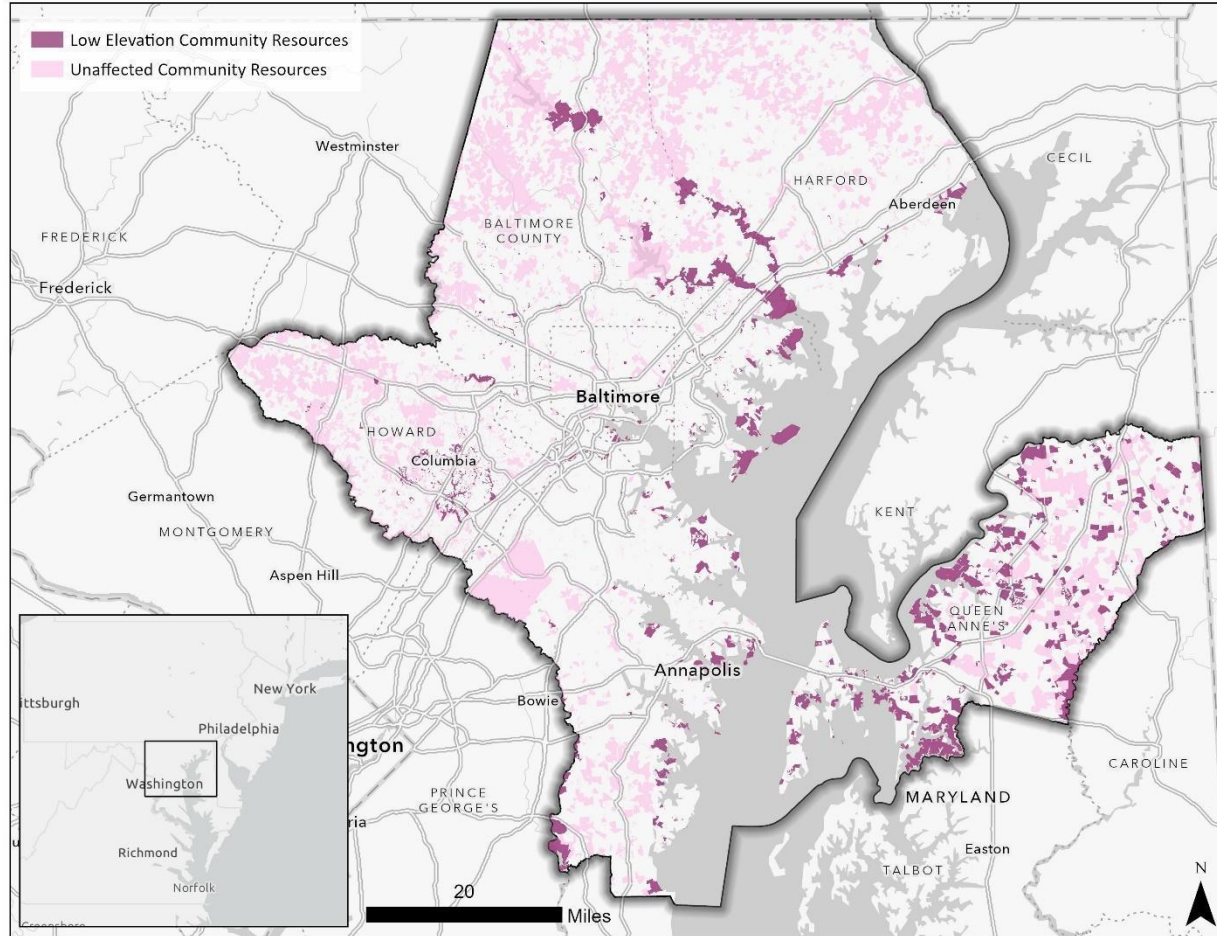


Category 4 Storm Surge



Shoreline infrastructure





Questions?

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bria1.pope@famu.edu

Project page:

<https://coastalscience.noaa.gov/project/assessing-community-risk-in-relation-to-flood-hazards-in-the-baltimore-maryland-metro-area/>

Data:

<https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/HZDQEF>



