

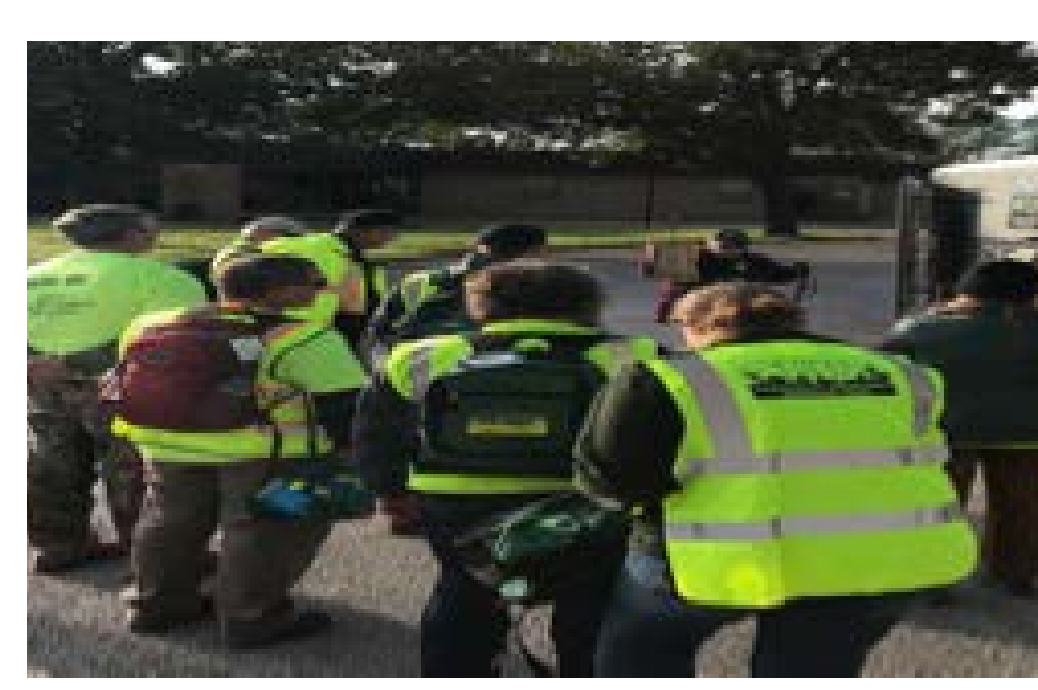
Race, Place and Preparedness: Exploring Community Emergency Response Teams (CERTs) in Rural Underserved Areas

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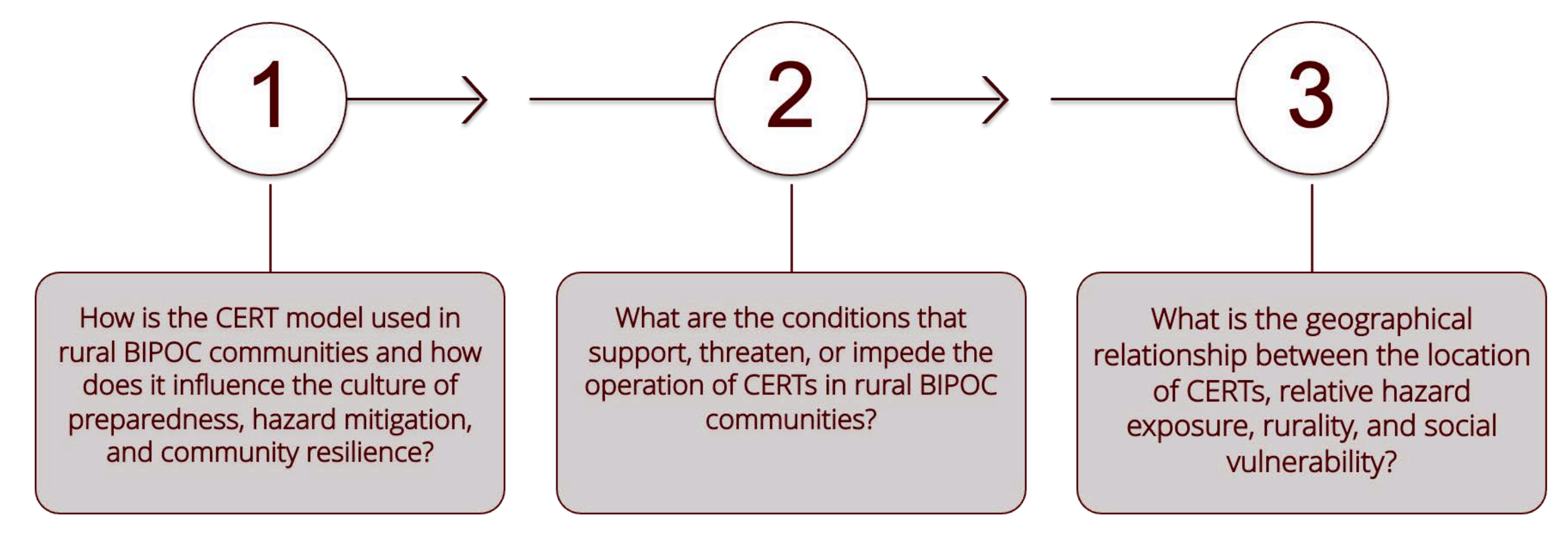
INTRODUCTION

Marginalized populations are more likely to be vulnerable to disasters due to problems of geography and resources. These communities are considerably disadvantaged by a devolution of responsibility by government and having to do more with less. The combination of various demographic factors influenced by systemic racism and ill-fitting policies for rural areas affects the ability of these communities to mount comprehensive preparedness and mitigation efforts in the face of disasters.

The Community Emergency Response Team (CERT) program, more than 30 years old, is often one of few educational programs that teach community members about hazards and localized risks; this has become critical due to limited resources of rural areas to focus on hazard reduction. The CERT program often studied in more urban areas is understudied in rural areas and specifically, rural places of color. Rural communities have higher social and physical vulnerabilities because of historic disenfranchisement, low economic investment, higher exposure to hazards and repeated impacts from low attention disasters.



RESEARCH QUESTIONS



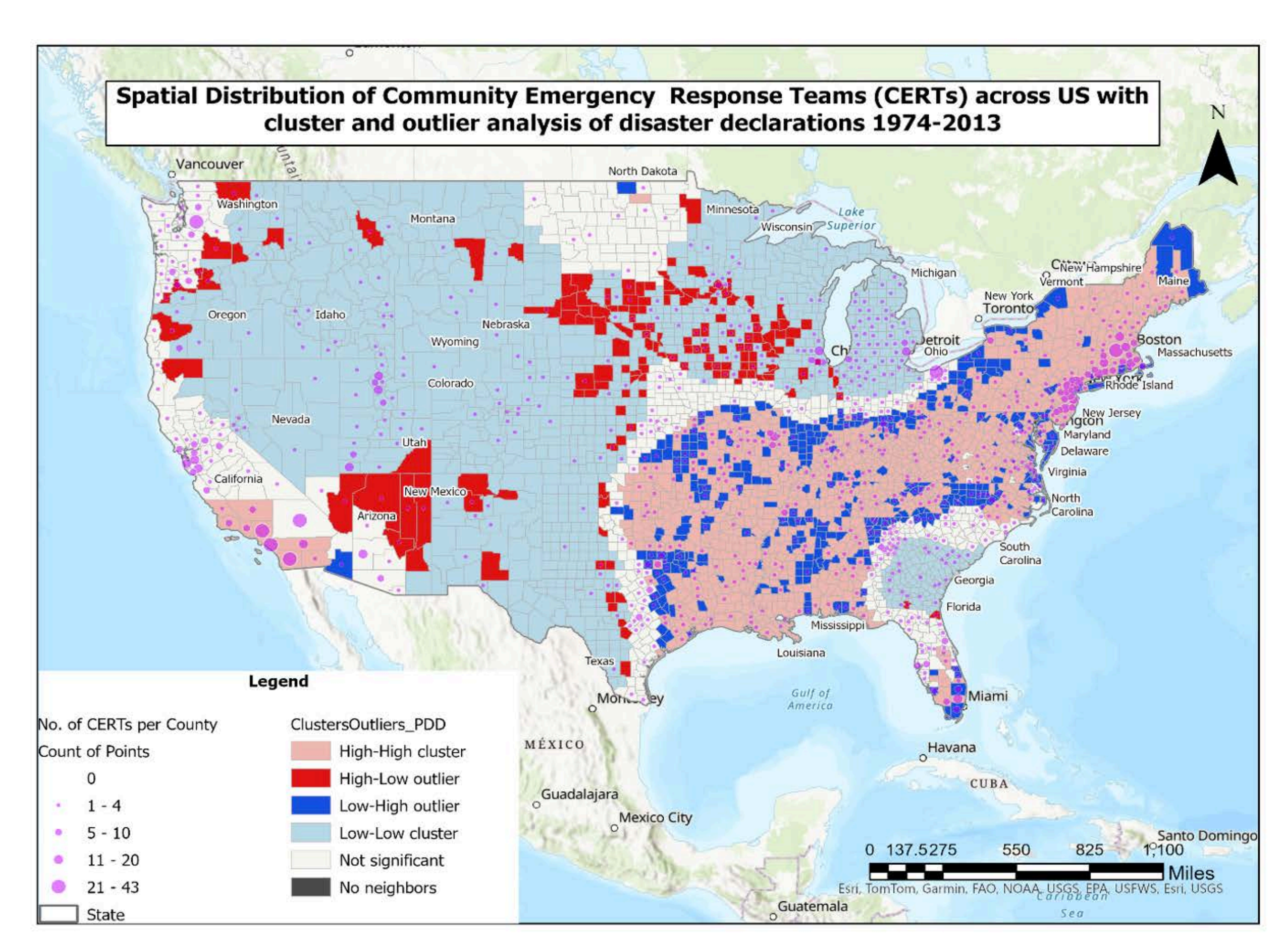
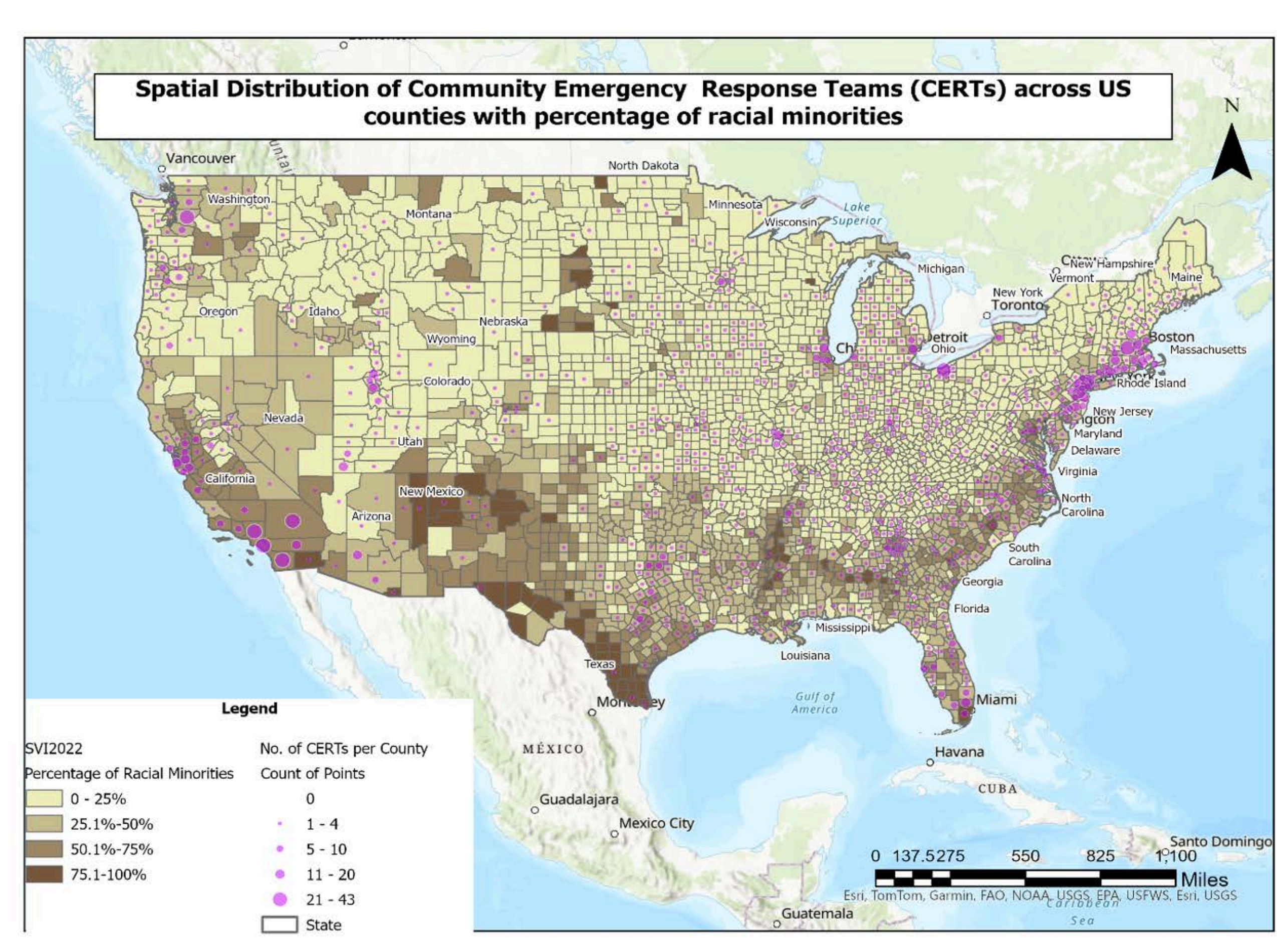
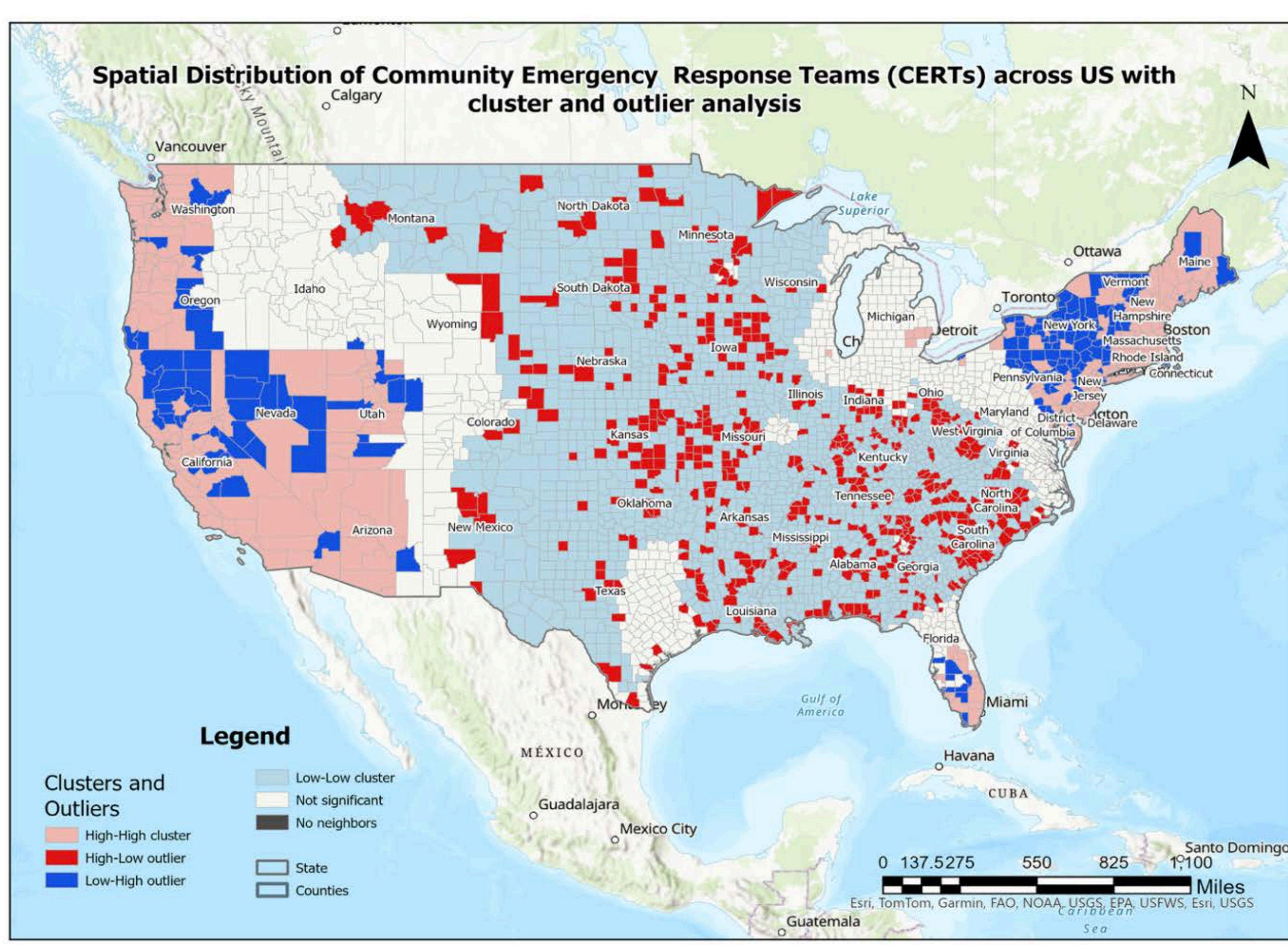
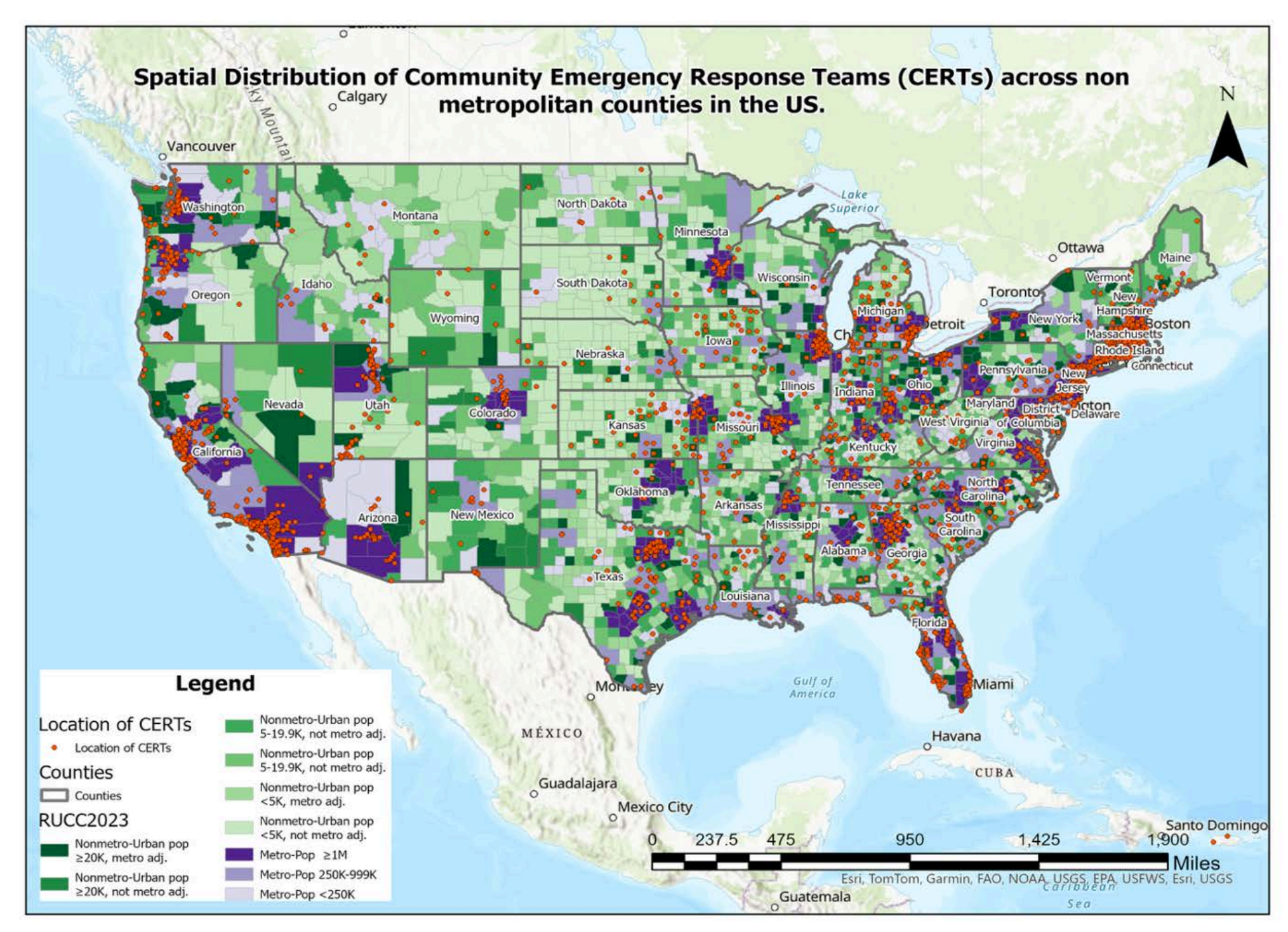
METHODS

Using data obtained from FOIA request to the Federal Emergency Management Agency (FEMA), I created CERT Registry and geolocated the addresses of the CERTs. I then Used Local spatial autocorrelation analysis (Local Moran's I) to assess patterns between the location of racial minorities, number of disaster declarations and the location of CERTs programs in the US. I then created a spatial geodatabase with the georeferenced locations of all the CERTs in the US. I used and created shapefiles using the following data, the SOVI CDC 2022- % Minority variable, Rural Urban Continuum Code (RUCC) 2023, National Disaster Declarations and US Counties.

LIMITATIONS

This study is exploratory to identify hot and cold spots for preparedness programming. One major limitation is that clustering analysis occurs around population density. To alleviate this I would standardize by using number of CERTs per population and number of disaster declarations per population of rural or urban counties. Also with DOGE cuts, data focus on community preparedness and equity programming was removed from the website so the CERT data is dated.

RESULTS



CERTs in Rural vs Urban Areas- There is high high clustering in areas like California, Florida and the east coast because of high population density and the facts that these areas high CERT program desinity because historically, the program grew from the two states. Midwest has a low low cluster meaning less CERTs proram overall.

CERTs in Racialized Rural Areas- Unlike my hypothesis, many predominantly racial majority areas has CERT programming especially in Tribal areas that used the program to conduct community engagement and emergency preparedness efoorts. Many predominantly white rural aeas also did not have CERT proram. This result aligns with literature about rural social identify and self reliance and being insular communities.

CERTs and Disaster Declarations - High clusters of disaster declarations were focused on the East Coat in more urban cities with higher populations which in keepinh with literature that disaster funding is inewuitable. Less CERTs are also concentrated in the low- high outlier areas which indicates that places are surrounded by a smaller area with large numbers of CERTs. These areas corresponds eith larger Tribal reservations.

CONCLUSION & TAKEAWAYS

- Literature indicates that community based participatory programs like CERT, can help combat apathy, boost public participation and combat social inequity issues.
- Cluster analysis is an exploratory method to identify hot and cold areas for preparedness programming efforts.
- Combining community development, asset based strategies and proactive preparedness can help build community resilience.
- Rural areas require culturally competent programming that acknowledges social constructs of rural communities

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