Human Trafficking in NC:

What Geospatial factors are most important to the facilitation of human trafficking, and what areas are potentially most at risk in North Carolina?

Image- Feedzai.com

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What Is Human Trafficking?

◈ Seizure, transportation, coercion, abduction, and overall control of other humans and their movements for the purpose of various monetary exploitations (MDP, 2021)

◈ Steps of Human Trafficking:

   1. Obtaining of Victim
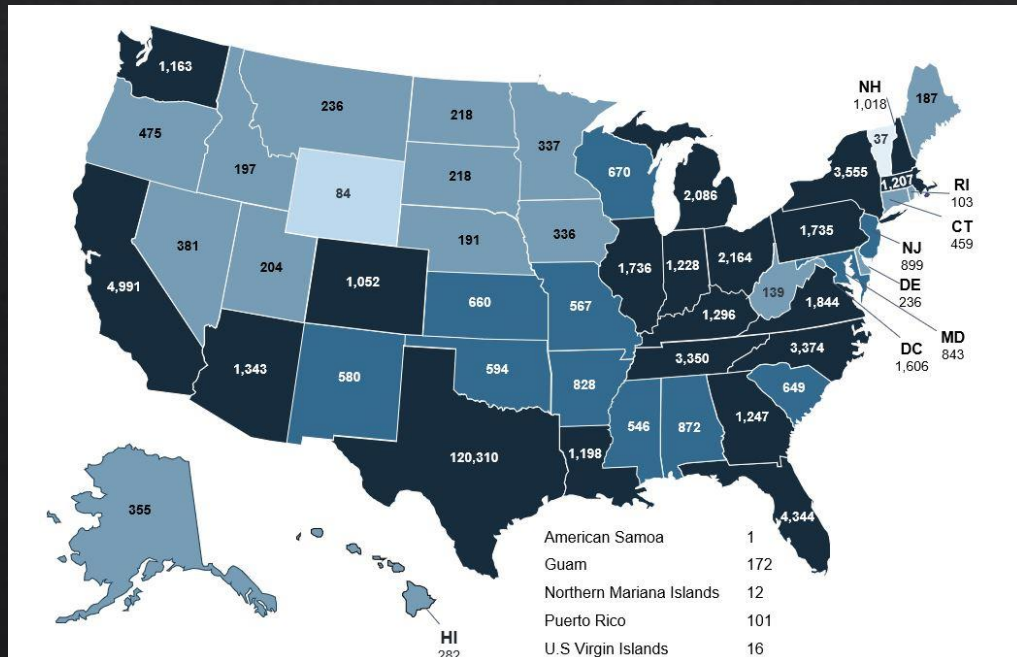
   2. Transportation/ storage

   3. Exploitation

Image Source- ABC News

Dworakpeck.usc.edu

Statistics

◈ 169 new victim cases per state, per year.

◈ 20,000 victims under the age of 18 currently operating in sex trade. (Polaris, 2022)

◈ App. 85% of victims are women and children. (Garcia, 2021)

◈ Statistics are based on known data which is small percentage of actual trafficking activity.
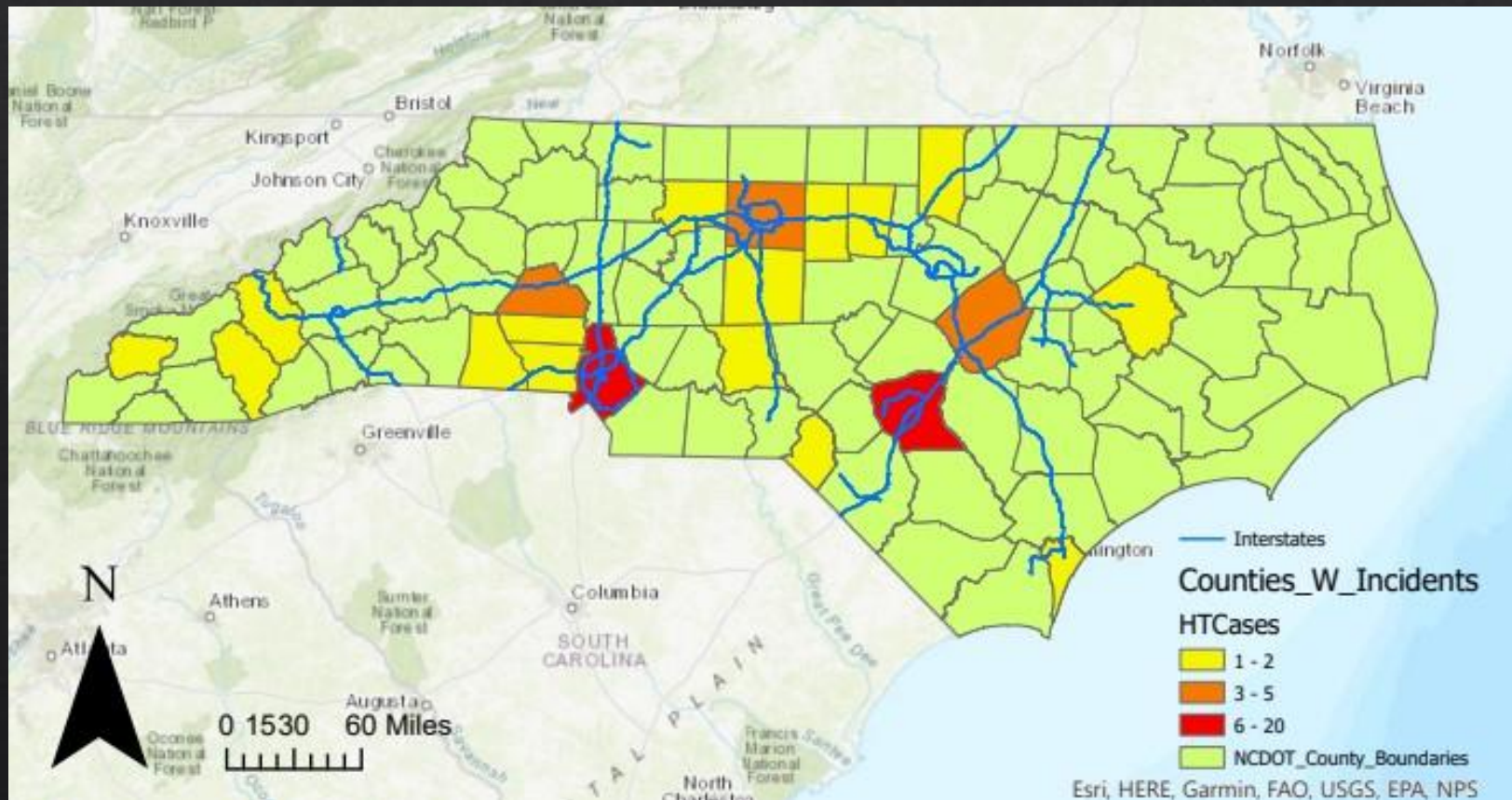
Project Objectives

◈ Supplement lacking human trafficking data

◈ Examine geospatial factors for the facilitation of human trafficking, rather than known data trafficking alone.

◈ Smaller scale/ neighborhood level risk assessment vs typical large scale city/ state level analysis.

◈ Focus on state of North Carolina. Consistent top 15 state for human trafficking incidents annually.

Geospatial Factors to Consider

◈ Initial phases of human trafficking tend to take place under similar environmental conditions.

◈ Low income- Neglected areas, low education, easier coercion and less publicity.

◈ High crime- Well organized human trafficking organizations remain hidden and go unnoticed in environment with high amount of general crime.

◈ Immigrant population- Cultural differences and language barriers disguise activities and create vulnerable targets via lack of social integration.

◈ Population- Cover/ Blending

◈ Interstates/ transportation hubs- Easy access to transportation of victims in and out of targeted areas.

Geospatial Analysis of Counties with Known Incidents

◈ Analysis of counties with known human trafficking cases for facilitating factors.

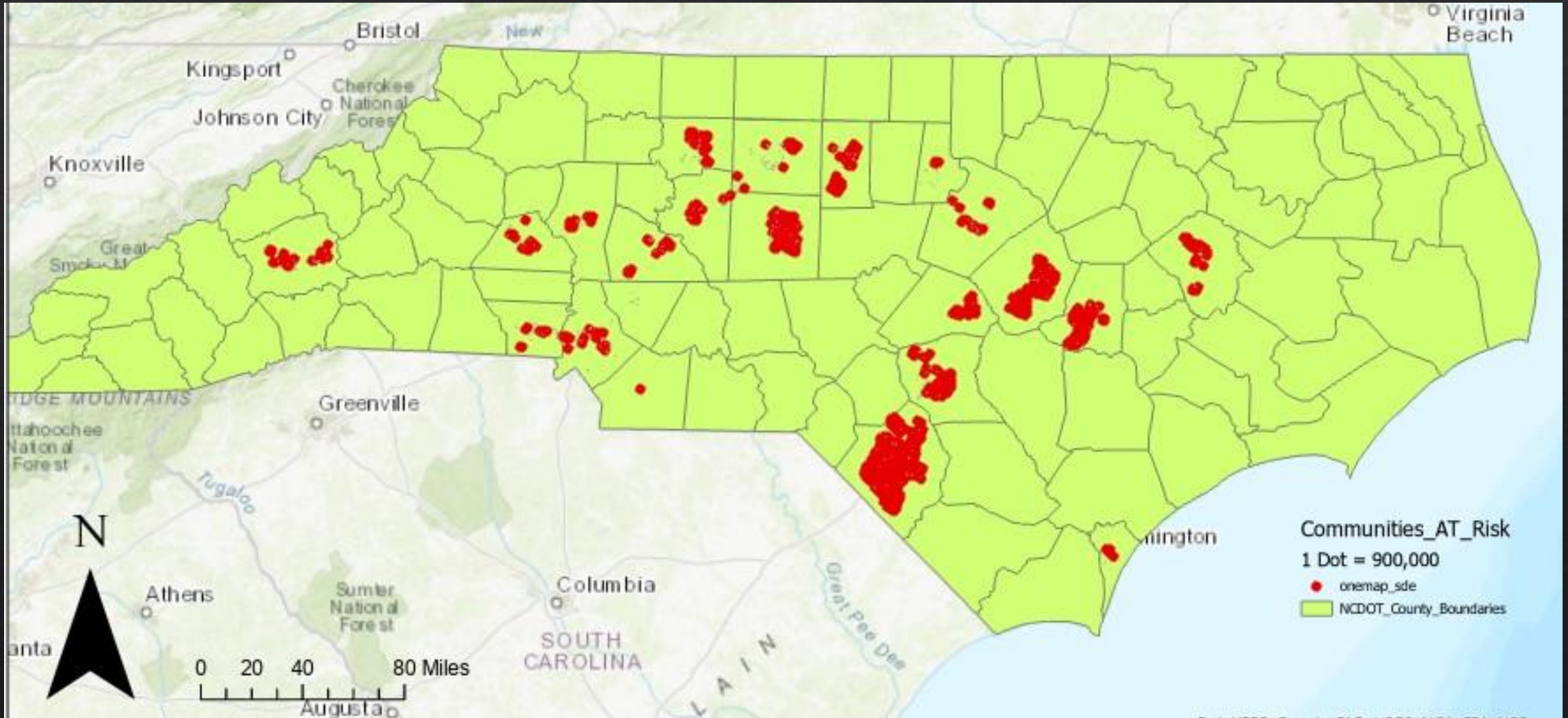◈ Factors to then be applied to risk assessment at community/ neighborhood level.

Results of HT County Analysis

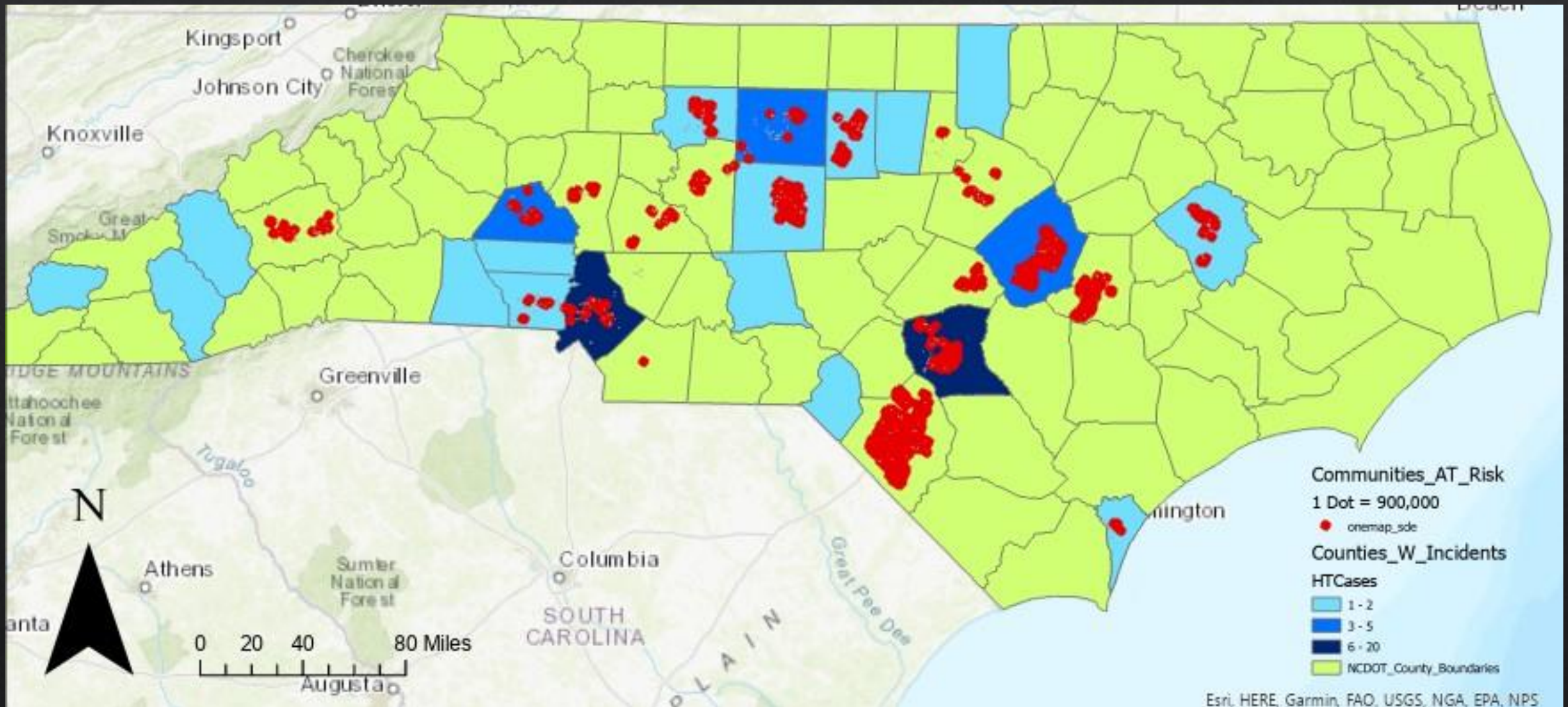| Variable	Human Trafficking Counties	All Other Counties	HT Counties High: Number of Cases	HT Counties: All Other Number of Cases
Median Income	49,504$	49,703$	52,419$	45,860$
Population (Factors of Rank by Population)	Only 4 Counties with HT Cases Rank in top 10 Pop. - Avg. Rank 29th.	6 of top 10 Ranked counties by pop- No rec. HT cases including #1 Wake County.	N/A Based on demonstrated Pop. Rankings.	N/A Based on demonstrated Pop. Rankings.
Crime Index	7,447.9	1,963.9	20,685.8	4,138.4
Interstate Access (% Counties Within 10mi of Interstate)	90%	48%	100%	80%
Immigrant Population (Avg. Per County)	19,855	5,444	66,701	8,142
Percent of Counties with Direct Access to Transportation Hubs- Shipping Ports and Airports.	95%	91%	100%	93%

Methodology: Risk Assessment

◆ Criteria derived from county analysis applied to community / neighborhood level in NC.

◆ ArcGIS Pro used for analysis.

◆ Census block layer added, these are the study units- small scale neighborhood level.

◆ Layers and tables added containing necessary demographic and location datasets, joined to census bock layer for analysis.

◆ Results analyzed in Geoda for clustering and removal of outliers.

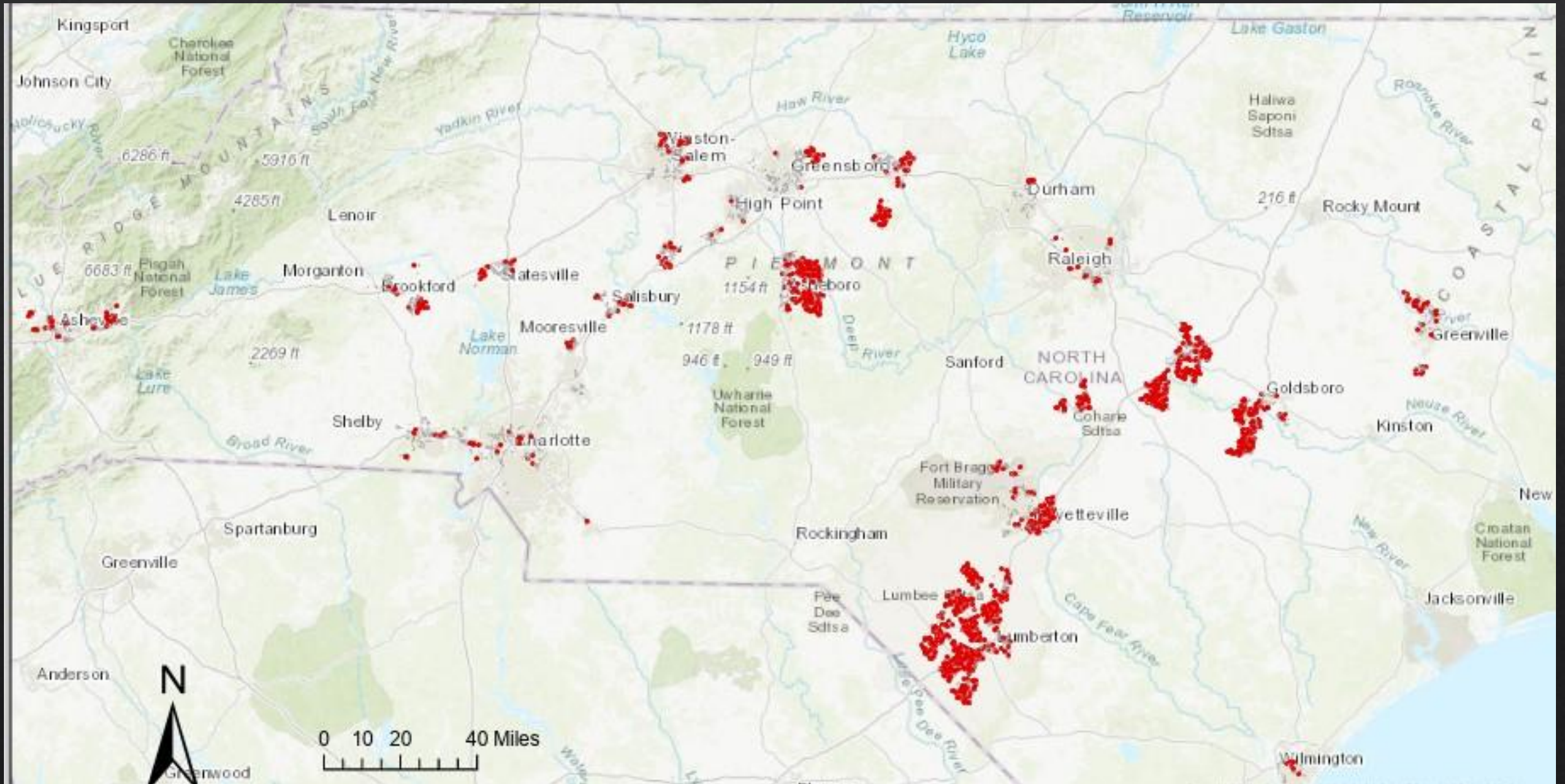◆ ArcGIS Pro used for deliverable using dot density for enhanced view of neighborhood clustering for at risk areas.

NC Risk Assessment Results

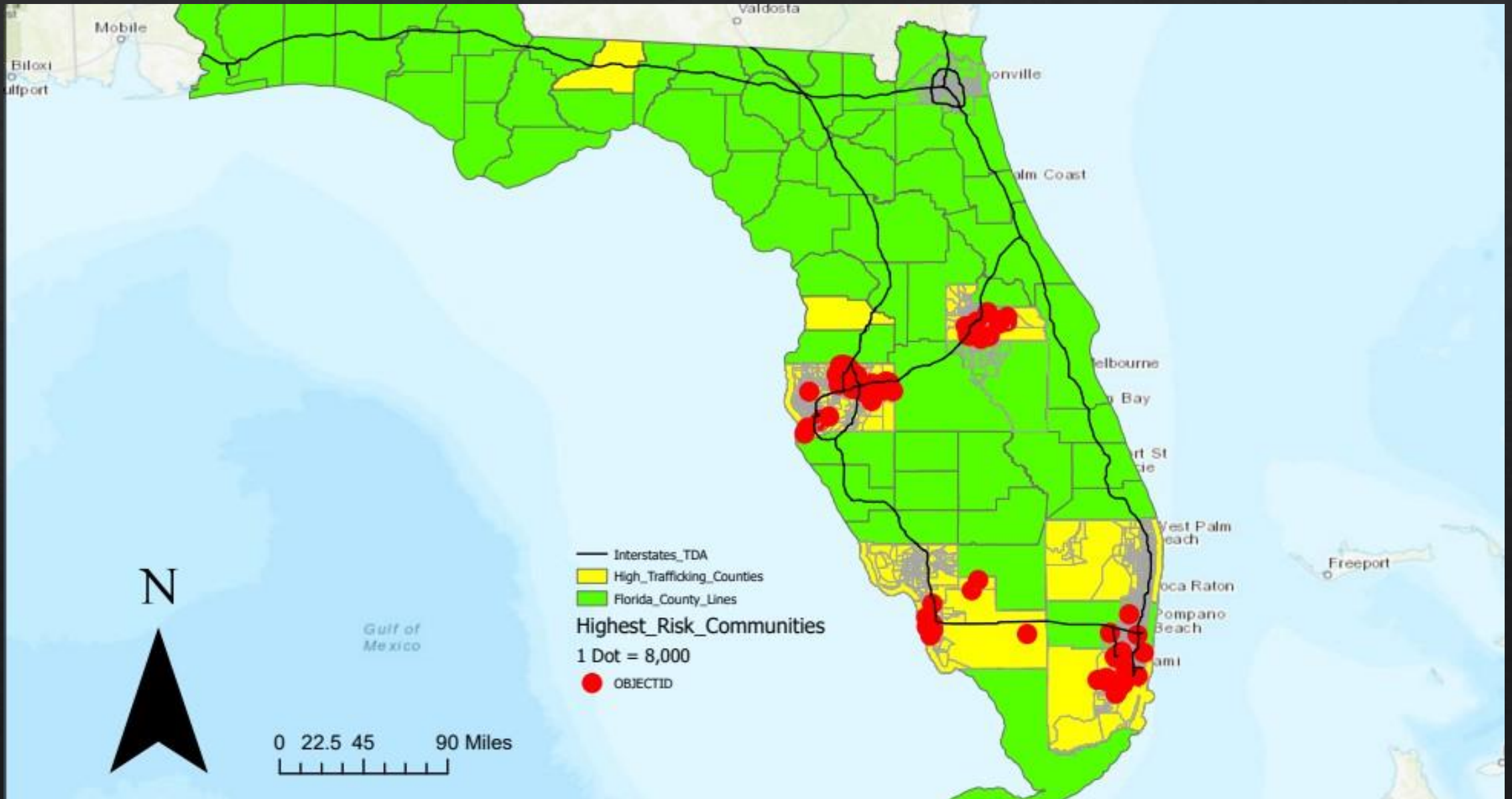# Risk Assessment Results vs Known HT Counties

Enhanced At-Risk View

Florida Assessment

◈ Applied to Florida to predict results of human trafficking cases.

◈ Assess different state in order to test methodology through other locations.

◈ Florida chosen for data availability and frequency of travel.

◈ Consistently ranked top 5 in HT cases.

◈ Same methodology applied to Florida as NC.

Florid Risk Assessment Results

Florid Risk Assessment Results vs Known Data

Conclusions

➢ County Analysis results showed crime, immigrant population, interstate access have highest positive

relationship to Human Trafficking.

➢ NC results coincided with known county cases. No direct common factors effecting integrity of results.

➢ Successfully predicted county results in Florida Study.

➢ Successful starting point for future analysis on human trafficking factors and good risk assessment for

current NC conditions.

What's Next?

◈ More analyses on other variables not tested in this project to further accuracy of methodology.

◈ Investigations into at- risk areas derived from analysis to confirm human trafficking activity.

◈ Public awareness and future enhanced law enforcement and resource centers in at- risk locations.

Thank you

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