Hotspots of Enclave Communities of Registered Sexual Offenders in Alachua County
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ABSTRACT TEXT: A recent report put together by the Florida legislative auditors states that there are about 30,000 registered sex offenders and predators living in FL and the number has been increasing steadily. The number of registered sex offenders and predators has grown by 53% since 2005. Sex offenders in Florida face barriers to housing because of the Florida statute 775.215, which does not allow registered sex offenders to live within 1,000 feet of a school, childcare facility, park, or playground. Some county and local ordinances often impose more restrictive residency requirements, contributing to sex offender clusters, also commonly called enclave communities. These clusters often attract higher levels of transient registered sex offenders. Although the total registered sex offenders in Florida with transient address is 6%, there are some counties that have higher than average number of transient registered sex offenders living. In Alachua County, there were a total of 452 registered sex offenders and predators living in 2018. A higher number of transient offenders also live in Alachua County (36), making it the top 4th county in FL with a high rate of transient offenders per 10,000 people.

This research is an attempt to identify the hotspots of enclave communities of registered sex offenders in Alachua County. The study also aims to determine the number of registered sex offenders in violation of the residency requirements within Alachua County.

Cluster Identification and Potential Interventions for a Poverty Alleviation Program
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ABSTRACT TEXT: There are currently three major aid organizations operating four poverty alleviation programs in Honduras. Feed the Future from USAID promotes the production of high-value crops in an effort to move away from subsistence farming. The World Bank has two programs, COMRURAL and ACS-PROSASUR. The COMRURAL project focuses on providing support for alliances among rural producers, and ACS-PROSASUR improves food and nutrition security in vulnerable households. The EUROSAN Occidente program from the European Union aims to strengthen food security, nutrition, and resilience through agricultural and nutrition education programs.

Though there is an effort to provide aid in Honduras, extreme poverty still exists for a variety of reasons. One potential cause of poverty despite existing donor programs is a lack of communication and coordination between organizations even though they are all working in the same locations.

The goal of this project is to analyze three prioritized clusters of aldeas to determine potential interventions for each that will complement the efforts of the existing aid organization to alleviate poverty in those areas.

The cluster identification process required the cleaning of survey data from all three donor organizations. The data was then explored and assessed using GIS. Ultimately, three clusters of aldeas were selected. One cluster’s aldeas are receiving aid primarily from USAID, one from World Bank, and one with some aldeas from each donor organization.

An initial hypothesis is that the cluster that is primarily receiving aid from the USAID program has a higher percentage of roads that are unpaved. Since the project aims are related to agriculture, it is expected that this cluster is more rural in nature. The hypothesis will be tested using an ANOVA test for statistical significance comparing the three identified clusters. In response to the results of the statistical tests, potential interventions will be developed for poverty alleviation. If the hypothesis is correct and there is a higher percentage of unpaved roads in the USAID cluster, a potential intervention could be the conversion of unpaved roads to all weather roads in order to increase connectivity and access to markets for rural farmers.

The results from this analysis and methodology are expected to contribute to poverty alleviation research and strategies in Honduras.
Monitoring for Village Burnings with SmallSats: A Case-Study in Myanmar
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ABSTRACT TEXT: Mass atrocities continue to occur in areas away from international observers and with poor information outflow, with the international community often learning days or weeks after the onset of violence. While organizations concerned with human rights are increasingly using visual analysis of high-resolution commercial satellites, this remains an expensive and impractical option for monitoring large areas at risk of human rights violations.

In order to address the need for rapid alerting of possible human rights violations in large, remote areas, we present an algorithmic approach to leverage high-cadence, smallsat satellite imagery to detect the burning of villages in the Republic of the Union of Myanmar within as little as two days of occurrence.

Comparison of this product with a database constructed from manual analysis of high-resolution satellite imagery between 1 August 2017 and 31 December 2017 produced estimates that were within 82.5% of the ground-reference database. This research demonstrates a functioning system to alert human rights practitioners to a potential destruction of villages and to corroborate refugee eyewitness accounts of destruction. This information can also be used to validate refugee asylum claims or for the prosecution of the perpetrators in international courts.