INTRODUCTION

South Africa has seen dramatic changes in its political and socioeconomic landscape over the last thirty years. Starting in 1948 with the implementation of Apartheid to 1994 when these policies were officially abolished. Since the abolishment governmental corruption has become an endemic problem and violence (both by and against the citizens) continues. The lives of the most severely affected – typically the impoverished black citizens – have improved little (NPR). That being said, the country is making steady and dramatic improvements in per-household advancements in amenities (NPR).

With continued violence and conflict in the country, it begins the question – what is happening with the protected environmental areas in the country? South Africa, and surrounding countries, have a policy of ownership where the wildlife on private land are property of the landowner (PERC). Also, South Africa is home to “The Big Five” of African Wildlife (lion, elephant, leopard, buffalo, and rhino). These animals, and others, are more likely victims of poaching for food, money, and illegal trafficking. As stated, this project will examine the spatial relationship between armed conflict density and distance from protected environmental areas within South Africa.

DATA QUESTIONS

- How has the density of armed conflict changed in South Africa since the new millennium?
- What is the relationship between armed conflict density and protected land?
- Is the type of conflict changing over the same time period?

RESULTS

Overall, conflict density has increased dramatically from 2000 to 2015. The only districts with decreased armed conflict density are Fizelle Dals in Free State, south of Pretoria, and West Cost in the Northern Cape, north of Cape Town. The types of armed conflict committed have also evolved. Early in the study period there was a balance between riots and violence against civilians but from 2005 on riots/protests have become the most frequent type of armed conflict. The greatest distance to a protected area is seen in the Northern Cape region in the Namakwa, Pixley, and Siyanda districts. This is also the region with consistently unchanged and low density of conflict leading to a ranking of far from conservation but low conflict. This is likely due to the land in the area being shrubby and unwelcoming to settlements and thus unwelcoming to protection regulations or conflict.

DISCUSSION AND CONCLUSIONS

This project initially intended to primarily focus on the relationship shared by poaching and distance from conflict areas while secondarily examining the conflict/protected area relationship. An extensive search was performed but location data (latitude/longitude, shapefiles, or other) was not available. Because of this the focus of the project was shifted to conflict and protected areas. A major hindrance to the initially proposed study had revealed a major gap in our knowledge of poaching as well as a potential for future research. A secondary hindrance was the incorrectly projected ACLED data which added confusion mapping but also provided another learning experience in defining projections. The resulting study shows clear trends between conflict, and conservation - especially when viewed in the scope of land cover. The region of South Africa around the Northern Cape is made up of barren or shrub covered land with arid climates. The population density is extremely low, generally <1 person per square kilometer. Between the climate and low population density it is not a desirable area for armed conflict. Compare this to the densely populated subtropical regions around Pretoria or the climactically diverse coastal lands around Cape Town and it becomes easy to see why conflict density is centered in these areas. The political landscape of South Africa with government corruption and dramatic shifts in race relations make the more populated areas of the country ripe for riots and protests. The less densely populated and rural areas are spared this fate.

DATA SOURCES

- Statistics South Africa (SSA)
- GeoNames.org
- Armed Conflict Location and Event Data project (ACLED)
- Global Administrative Areas (GADM)
- South Africa Protected Areas Database
- ESRI Database
- Global Land Use Cover Initiative (GLLC)
- Literature citations available on request