On the move!
Assessing the drivers and patterns of a decade of forced displacement in Africa

Introduction

Human migration within Africa is a common phenomenon. However, over the years, the reasons that compel individuals to migrate from their country of origin to another country have changed. Armed conflicts and civil wars have become amongst the most important causes behind human migration within Africa. This has only been aggravated by epidemics and outbreaks. Economic reasons have also been a recurrent cause for human migration. This project aims to discuss the drivers of forced displacement and patterns it has taken over the last decade from 2007 to 2016 in Africa

Research Questions

This project aims to answer the two following questions:

1. Is there a cluster of countries of origin for refugees and internally displaced people within Africa? If so, which are those countries? How has this clustering changed over the last decade from 2007-2016?

2. What factors are causing individuals to migrate within Africa? Is armed conflict the only reason for refugees to migrate? Is migration due to armed conflict aggravated by other economic and public health reasons?

Data & Methods

UNHCR : Data on refugees in country of asylum, refugees in country of origin and internally displaced people was used to conduct an exploratory spatial data analysis in GeoDa and the space-time analysis in ArcPro by performing a hot-spot analysis .

Uppsala Conflict Data: The kernel density tool in ArcMap was used to map the Uppsala conflict data in order to identify the most vulnerable locations in Africa.

World Bank World Development Indicators, WHO epidemic data, International Disasters database: GDP per capita , harmonized list of conflict affected countries, natural disaster data and data on epidemics were used to conduct a regression analysis in Stata/GeoDa

VARIABLES	(1) Log(refugees from country of origin)
Conflict	2.189***
	(0.244)
GDP per capita	-0.000210***
	(.00003)
Epidemic	1.118***
	(0.263)
Disaster	0.275***
	(0.0743)
Constant	7.441***
	(0.213)
Observations	534
R-squared	0.313

Standard errors in parentheses
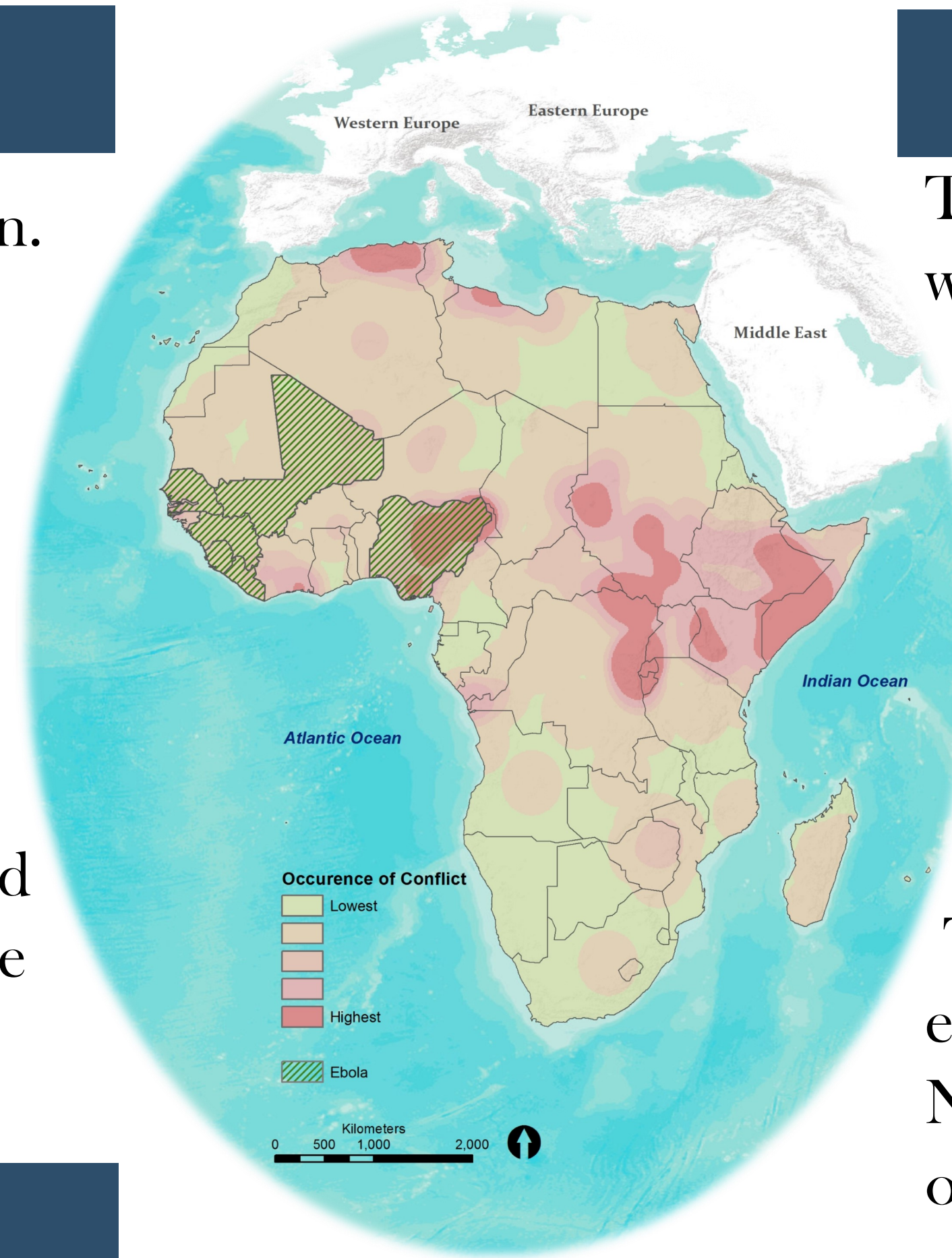*** p<0.01, ** p<0.05, * p<0.1

Results

The exploratory spatial data analysis shows a cluster of countries with high refugee outflows and high internal displacement in East Africa. Kenya, Ethiopia and South Sudan show a cluster of countries with high levels of displacement surrounded by other countries with high levels of displacement for migration outflows for 2016. A similar cluster appears for IDPs in Somalia and Angola. The results from the regression analysis shows that countries classified as conflict affected report a 2.1% increase in the refugee outflows than non-conflict countries.

The space-time analysis of internal displacement shows the emergence of new hot-spots in West Africa (Benin, Niger, Nigeria and Cameroon). New hot spots indicate the emergence of high levels of displacement. East Africa continues to have consecutives hotspots for both internal displacement and refugee movement meaning continued high levels of displacement.

Conclusion

These results suggest that conflict is a major contributor of forced displacement across borders and internally within a country. Occurrences of natural disasters and epidemics can aggravate human migration.
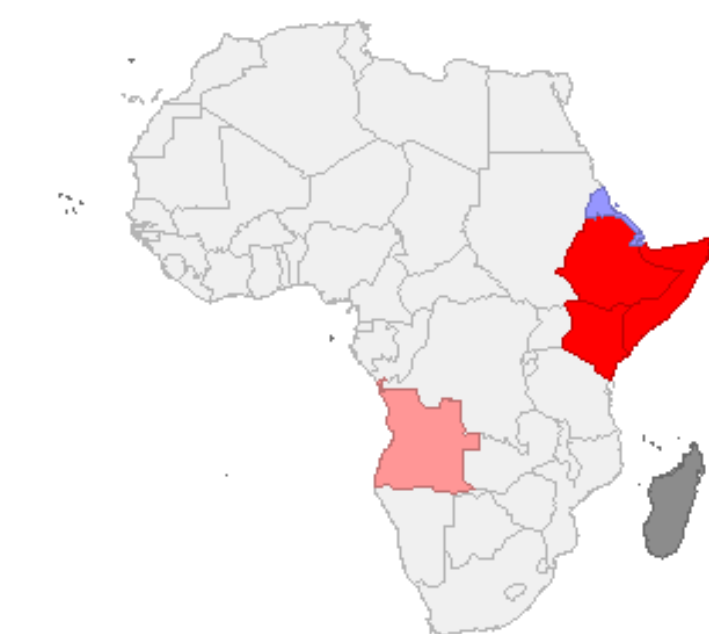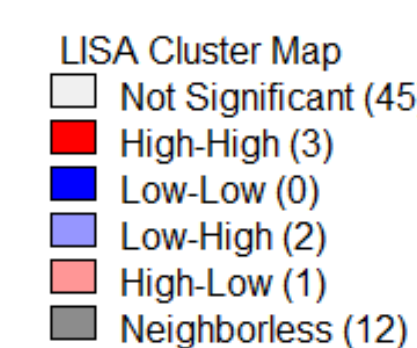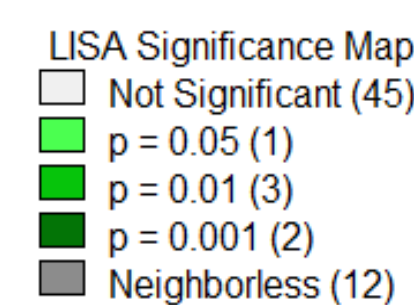
However, due to the lack of sufficient high quality data on forced displacement and the gradual speed of migration, this analysis suffers from some limitations. This analysis can be extrapolated through a spatial regression analysis by introducing a spatial error.
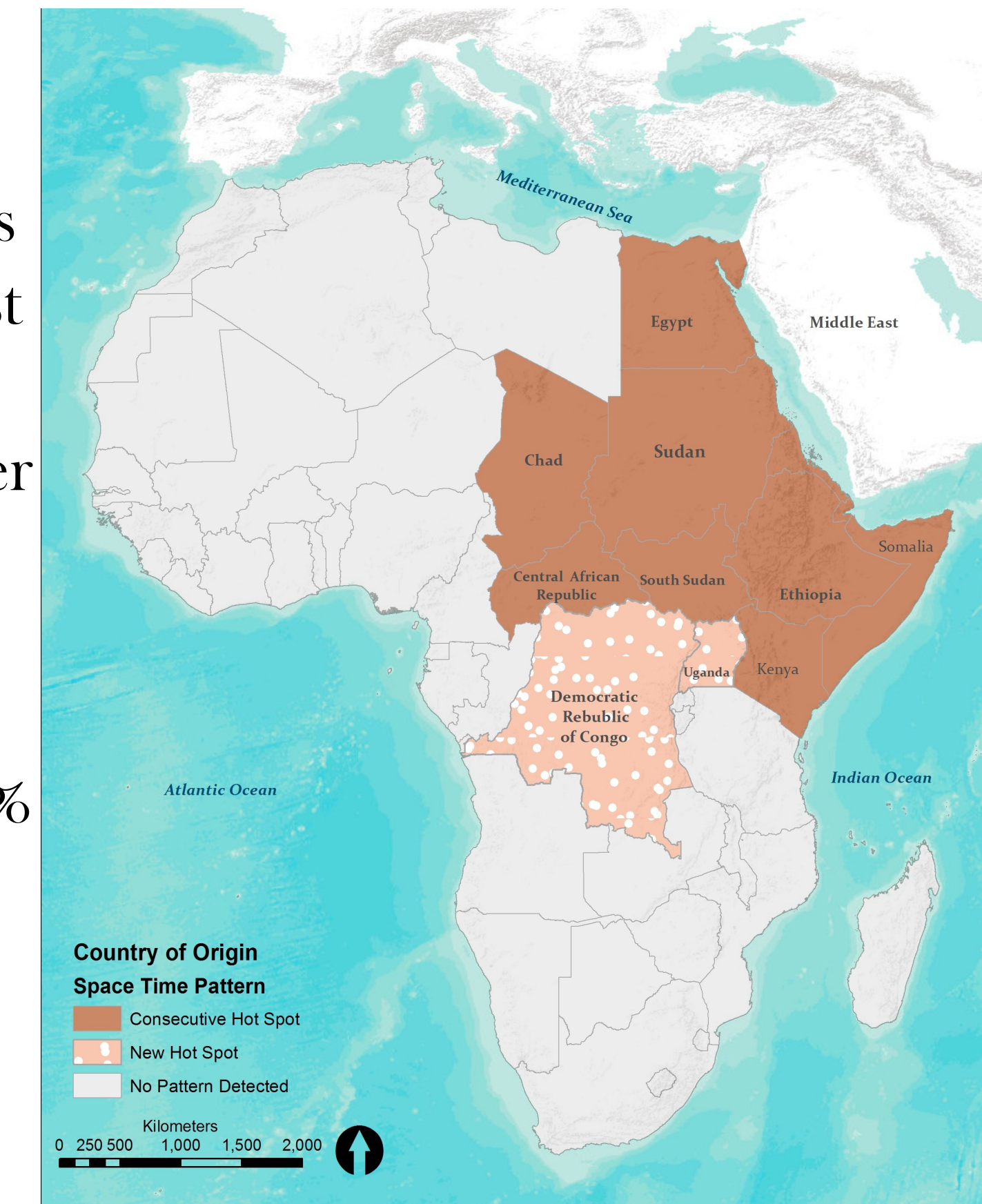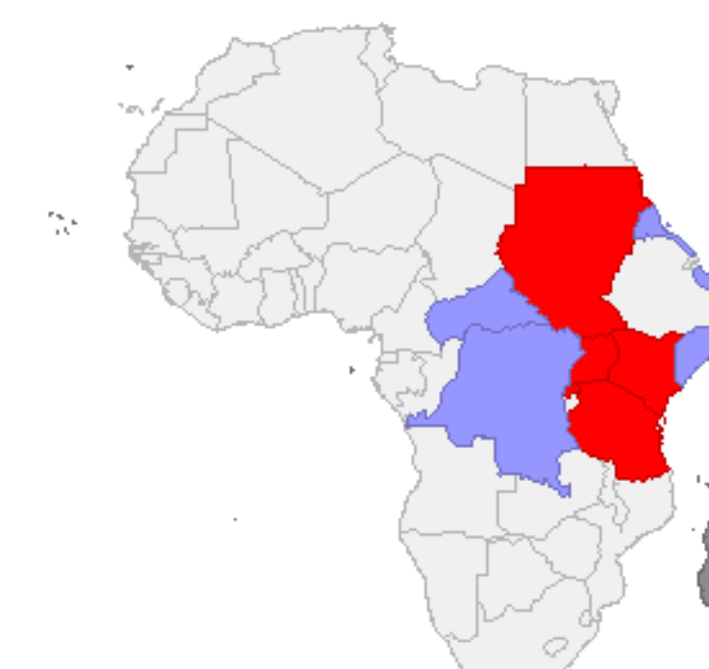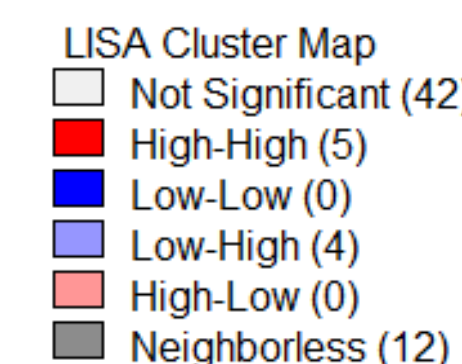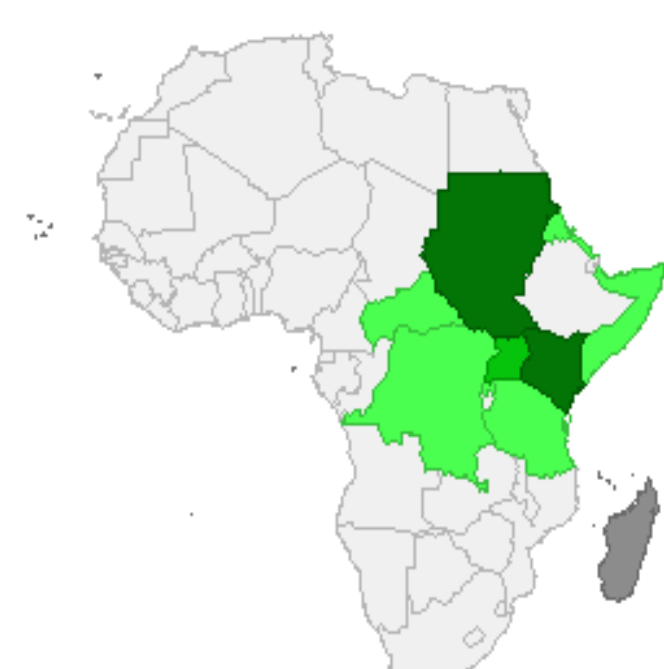

Space-Time Analysis of countries of origin for number of refugees from 2007-16

Space-Time Analysis of countries for number of Internally Displaced People from 2007-16

Univariate LISA for Internally Displaced People

Univariate LISA for refugees from their country of origin

Anmol Kamra

Advanced Geographic Information Systems (GIS102)

Projection: Africa Equidistant Conic

Sources: UNHCR Refugee Data, Uppsala Conflict Data Program, World Bank harmonized list of fragile and conflict affected countries, World Bank world development indicators, EM-DAT world disaster dataset, WHO (epidemic data),

Image: Pierre Holtz for UNICEF

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