

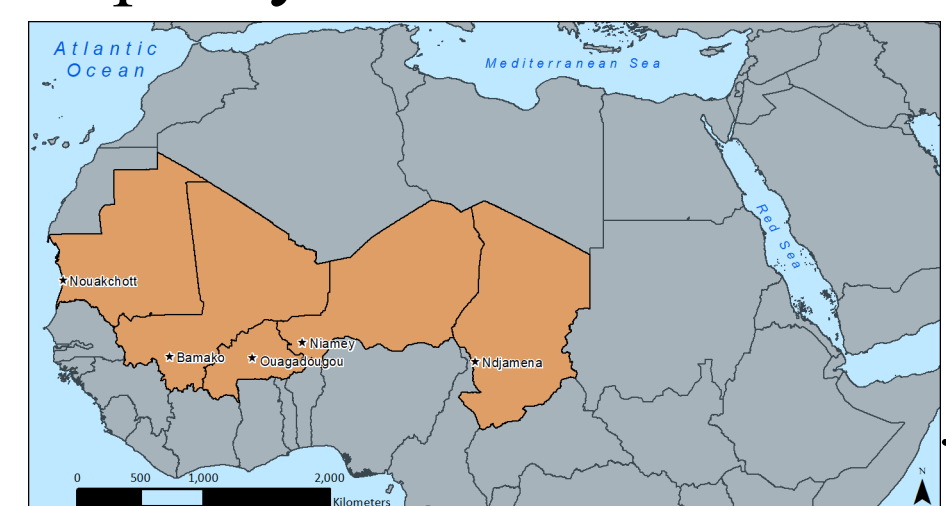


DESTABILIZATION IN THE SAHEL: 2012-2019

HOW JIHADIST ACTIVITIES SHAPE AFRICA'S MOST TURBULENT REGION

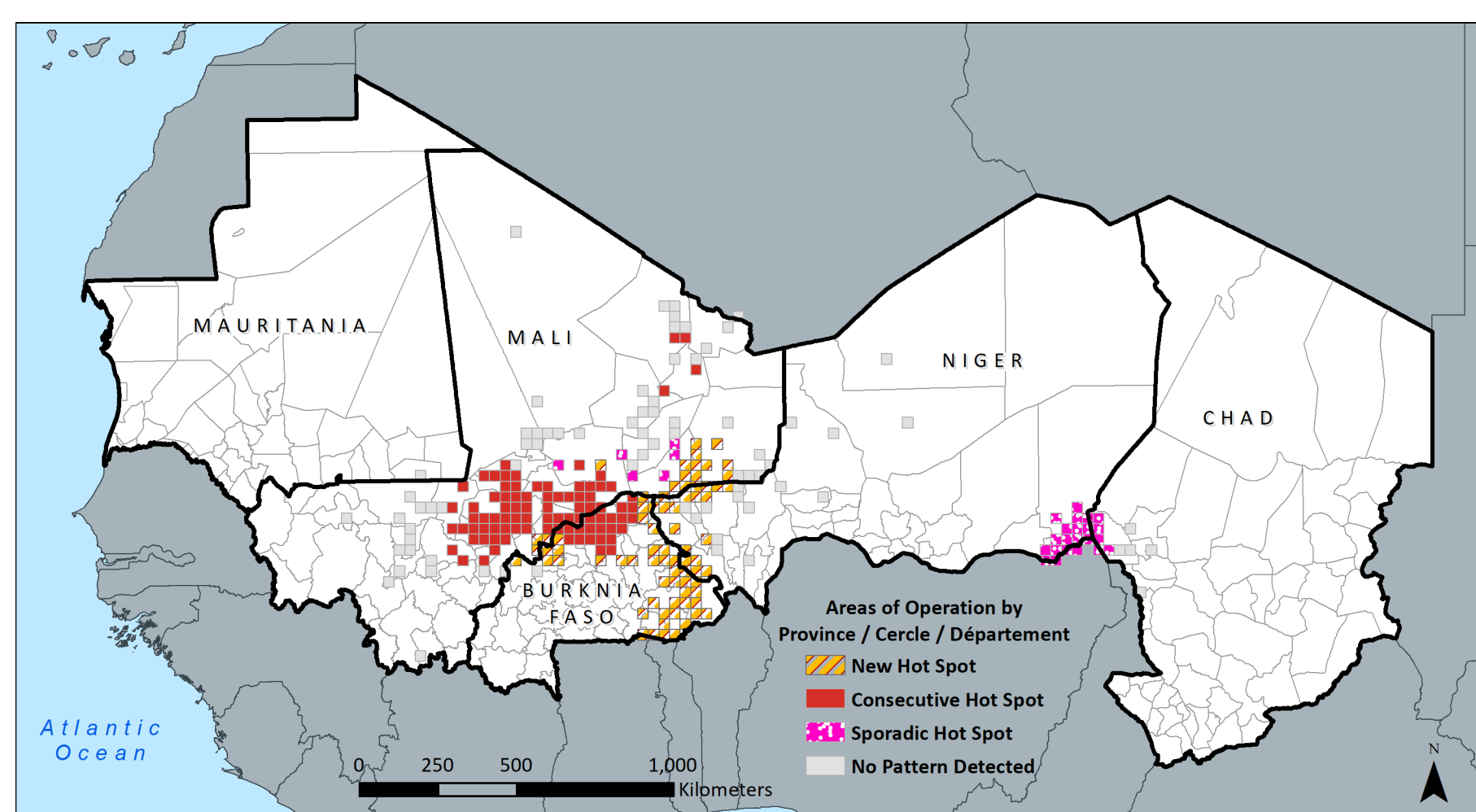
INTRODUCTION

The Sahel is the fastest growing source of instability throughout the African continent. In 2012, Islamists controlled the entirety of northern Mali. The following year, France launched a military operation to re-capture all territory and protect the Malian government from collapse. The United States also designated Operation Juniper Shield to build partner counterterrorism capacity in North and West Africa in recent years.



Burkina Faso, Chad, Mali, Mauritania, and Niger established the G5 Sahel in 2014 to battle regional jihadist groups. Jihadist-related activity continues to be a burgeoning threat, despite international counterterrorism pressure since 2012. Jihadist groups exploit gaps in fragile security and governance institutions, which provide new safe-havens for these nefarious actors to thrive.

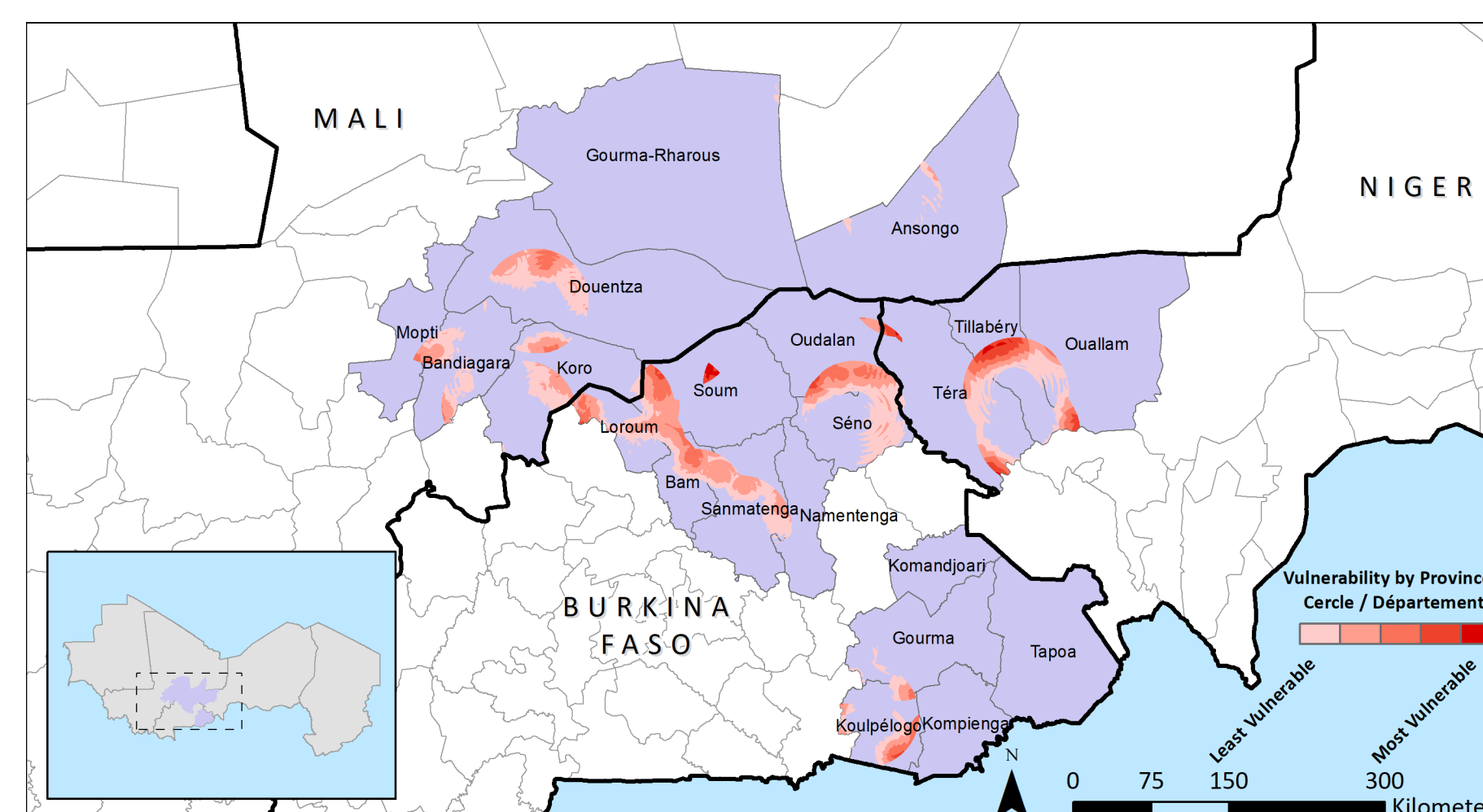
EMERGING HOTSPOT ANALYSIS, 2012-2019



SPATIAL QUESTIONS

How has jihadist activity changed between 2012-2019?
Where is jihadist activity the most concentrated?
How much of the population is exposed in these areas?
Where are civilians most vulnerable in these areas?

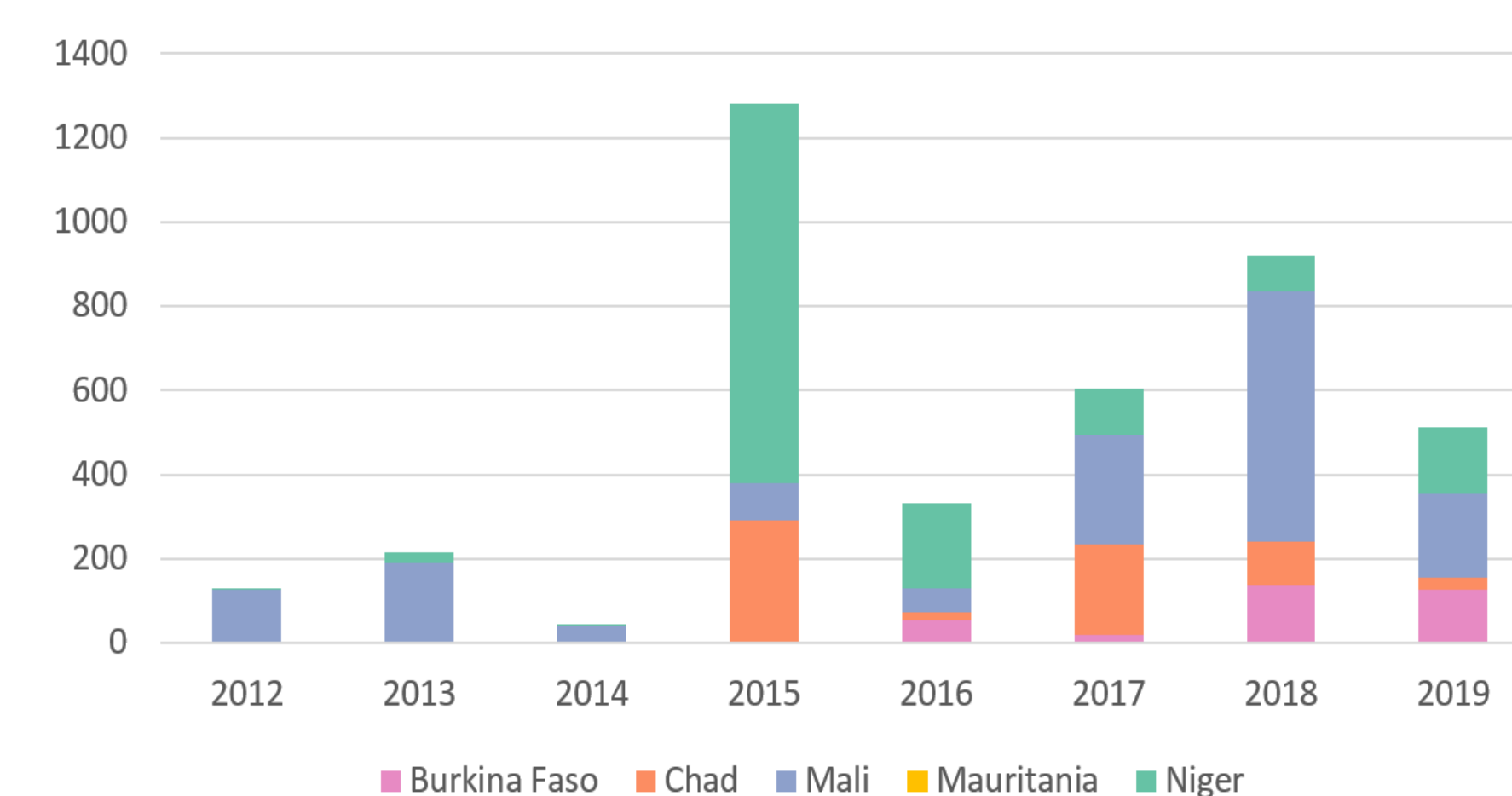
TRI-BORDER AREA VULNERABILITY, 2019



TRI-BORDER POPULATION EXPOSED, 2019

Country	Population	Percent of Total
Burkina Faso	3,812,607	21 percent
Mali	1,582,304	8.5 percent
Niger	1,471,774	7.4 percent

JIHADIST-RELATED FATALITIES BY COUNTRY

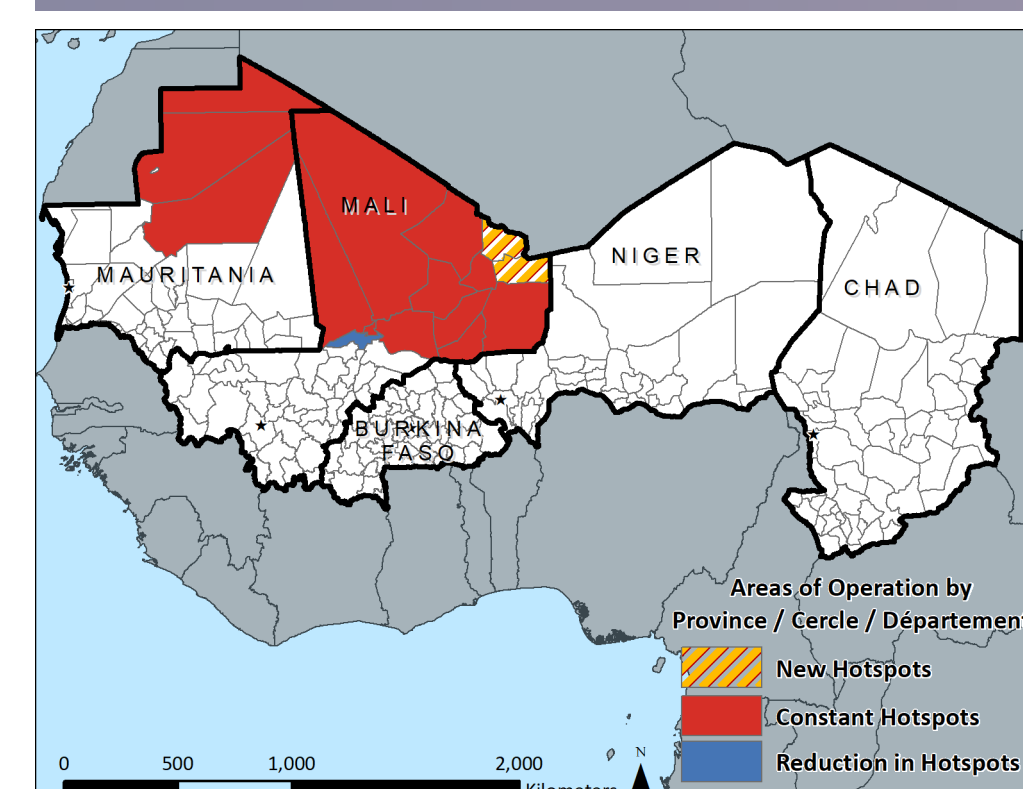


Nigerien soldiers participate in FLINTLOCK, a U.S.-led exercise to enable African partners to stabilize regions of North and West Africa. Photo: DoD.

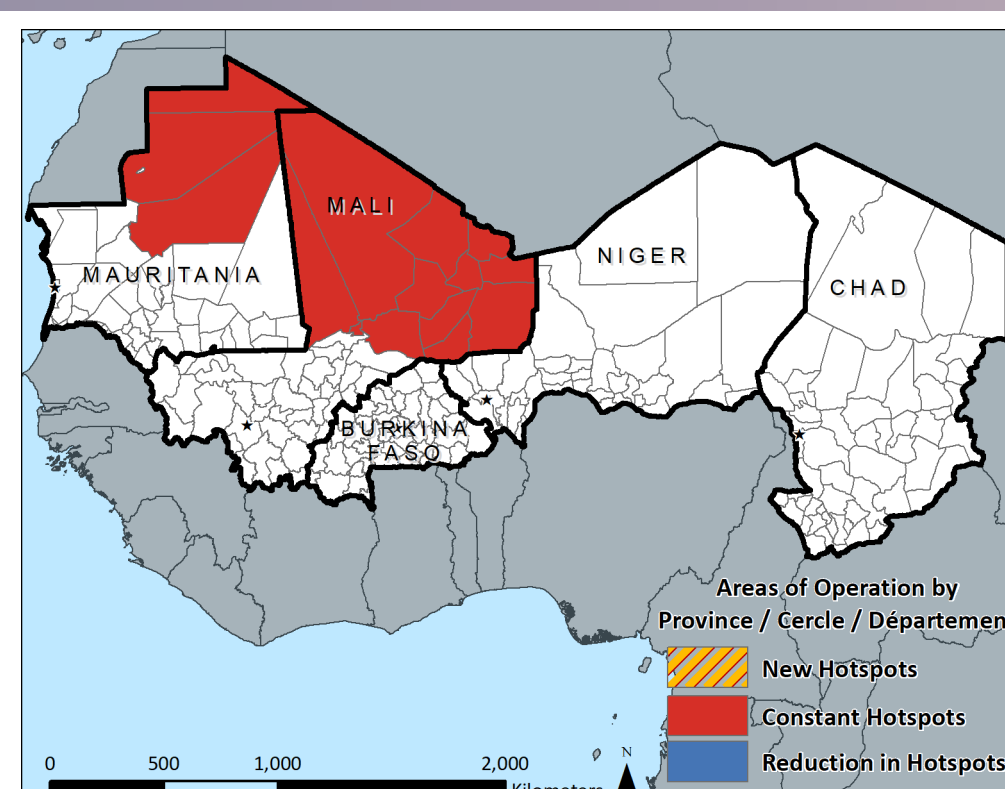


French and Malian soldiers conduct a routine patrol in southern Mali in March 2016. Photo: TM1972.

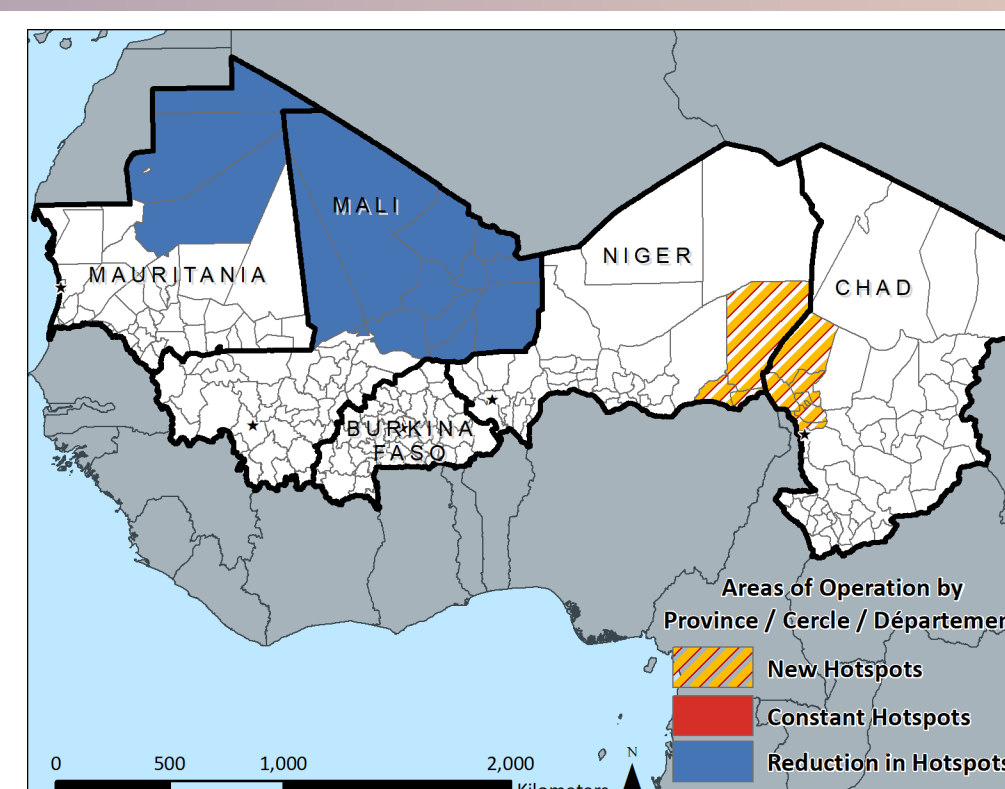
2012-2013



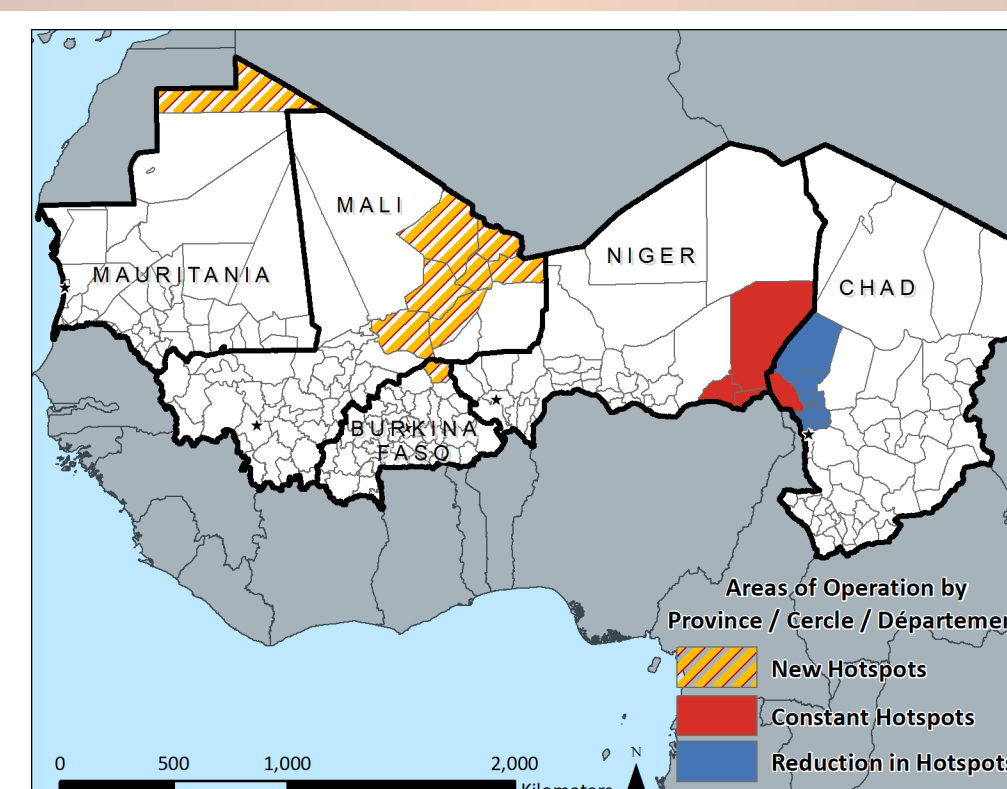
2013-2014



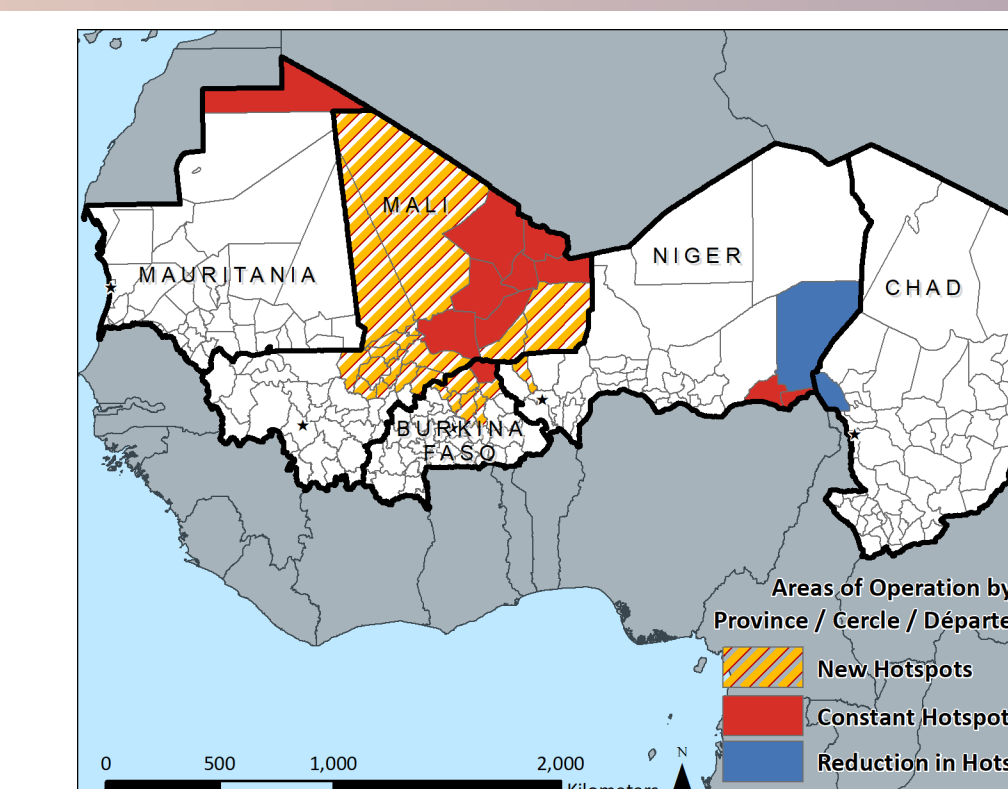
2014-2015



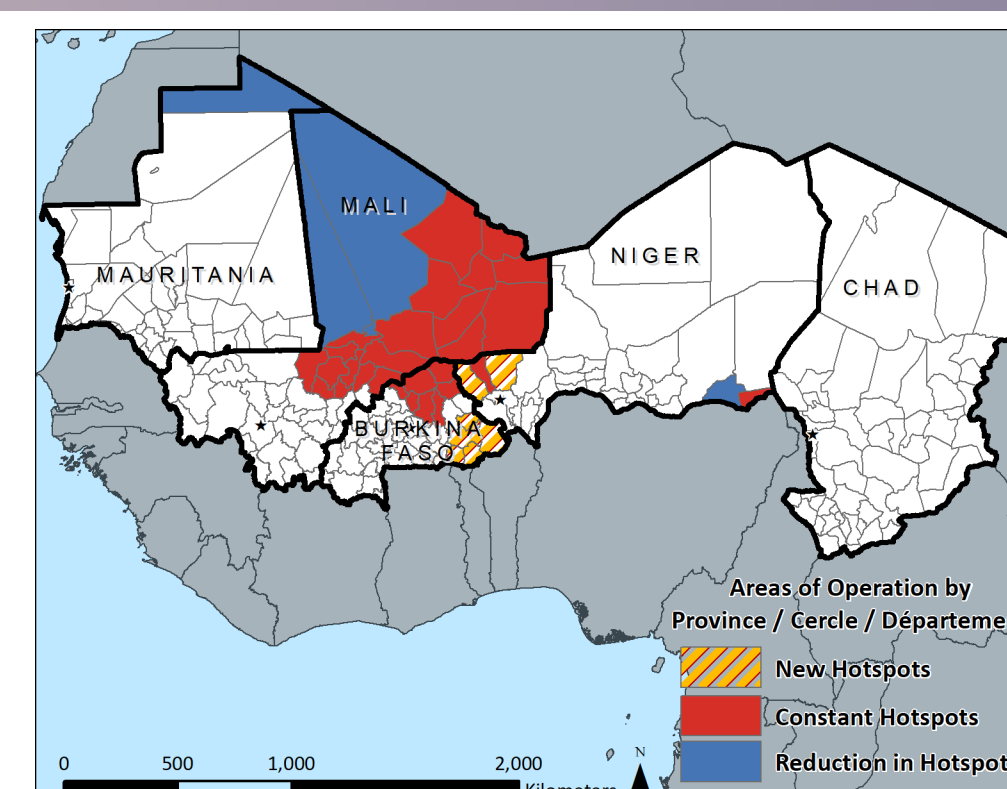
2015-2016



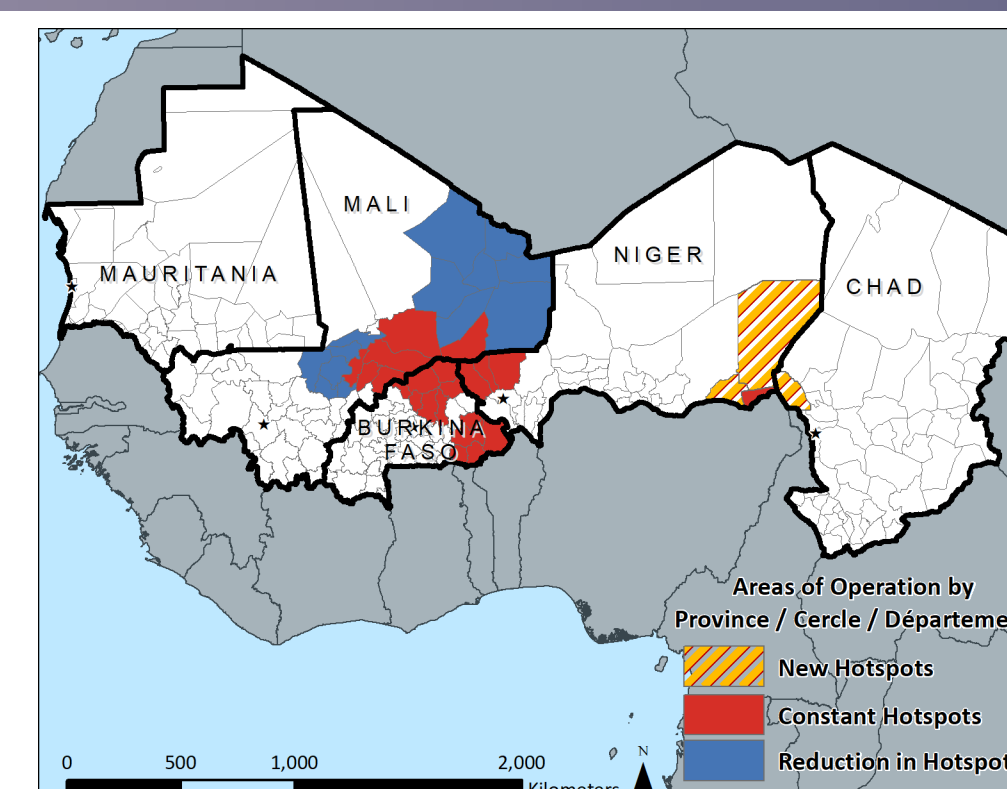
2016-2017



2017-2018



2018-2019



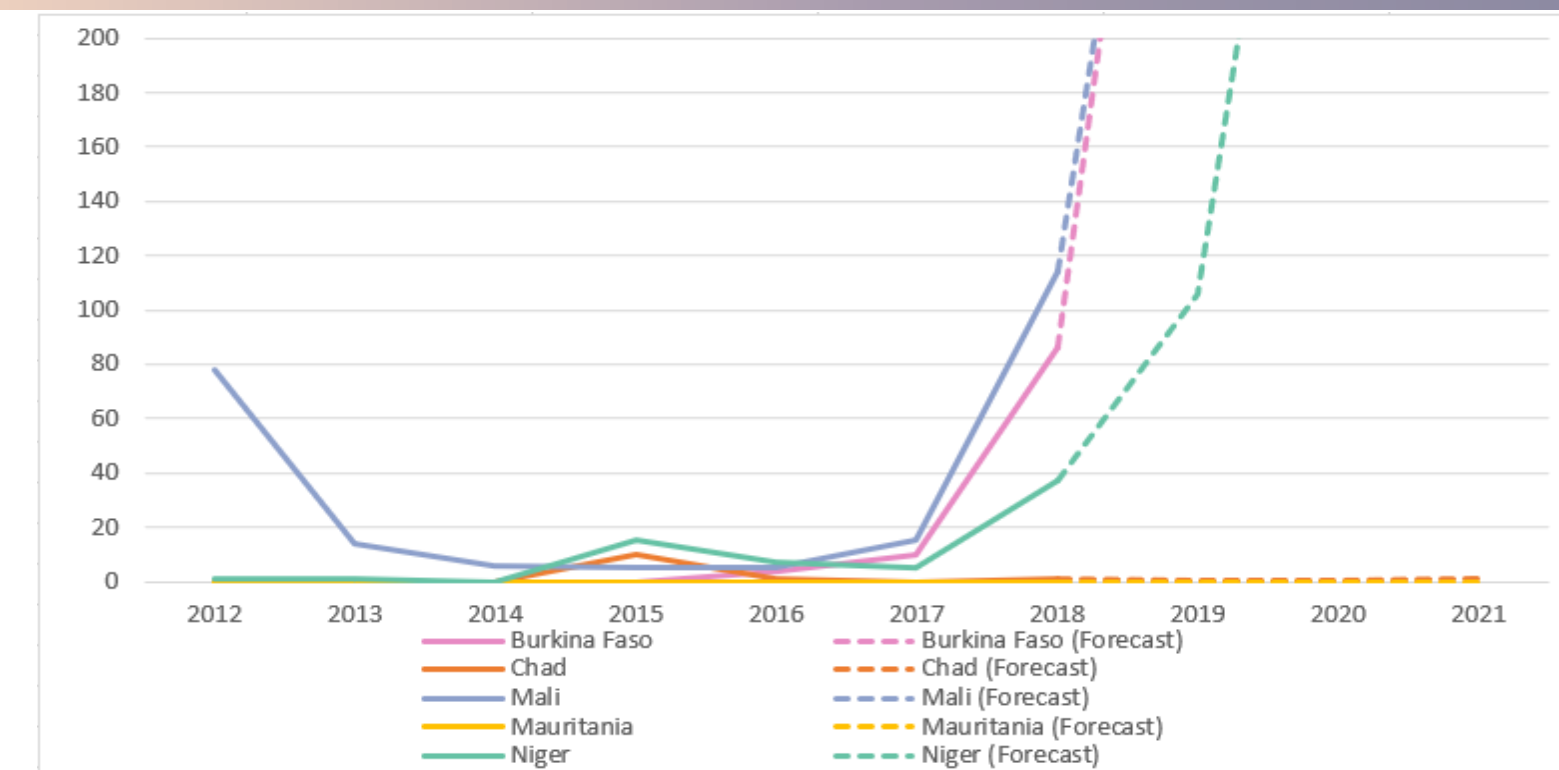
METHODS

Conflict data cleaned by year (January 2012 - March 2019), actor (al-Qa`ida- or ISIS-affiliated groups), and country (G5 Sahel member states) powered this analysis. Getis-Ord Gi* produced hotspots with 90 percent confidence or above, which enabled for change detection between each year using the Raster Calculator. Next, a space-time cube and emerging hotspot analysis identified constant, new, and sporadic hotspots during the entire study period. Zonal Statistics as Table then extrapolated the population residing in current areas of constant hotspots in the tri-border area. Euclidean Distance of primary roads, health sites, government buildings, schools, markets, and conflict points then allowed for a reclassification using the Weighted Overlay tool. The Conditional tool highlighted the most vulnerable populations, which revealed areas with composite scores between 6 and 10.

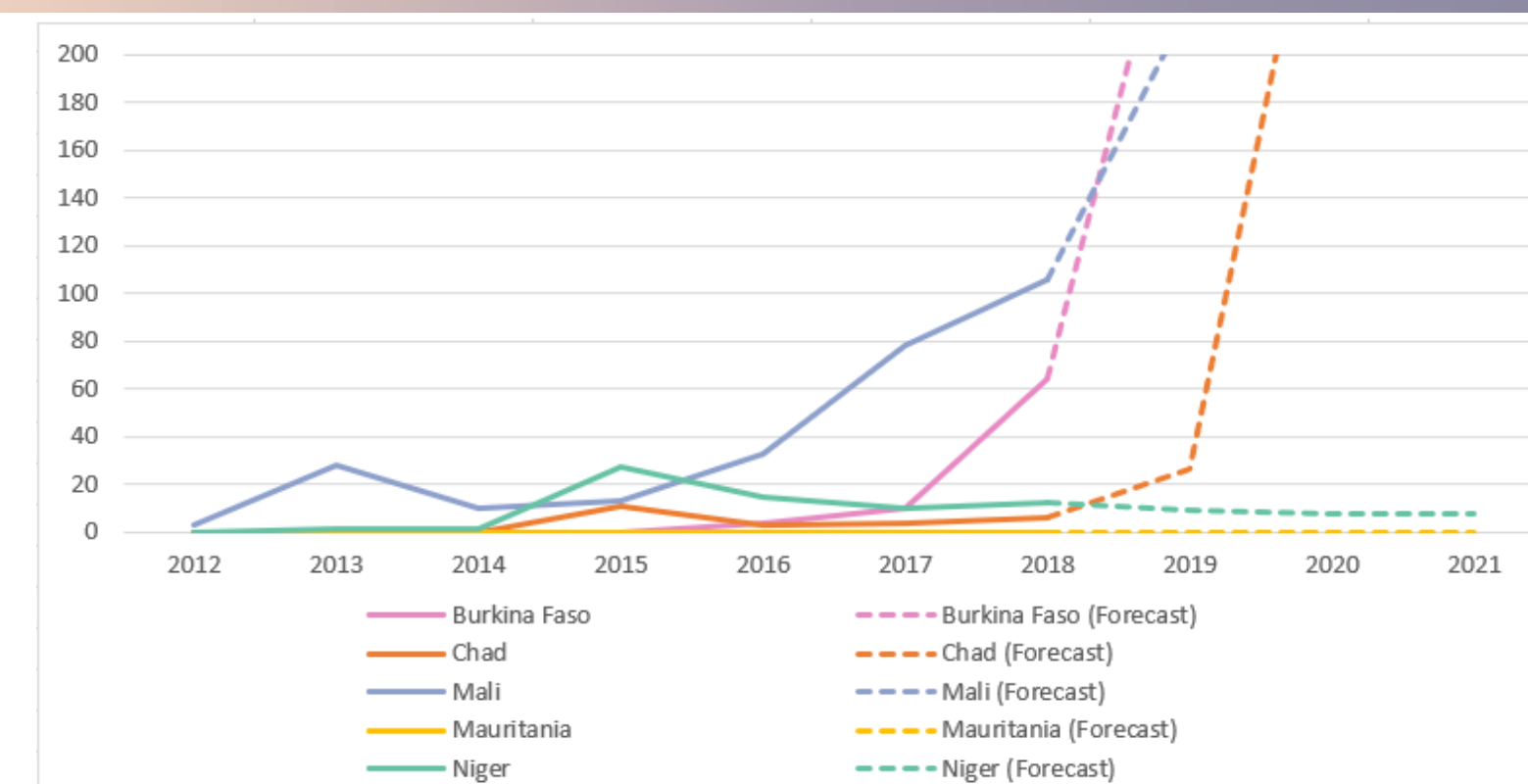
RESULTS AND CONCLUSIONS

Spatial statistics reveal the spread of jihadist-related conflict into northern and eastern Burkina Faso, and western Niger. This suggests external factors drove jihadist activity southward throughout Mali and into new safe-havens. The Emerging Hot Spot Analysis indicates consecutive activity in central Mali, new hotspots in the tri-border area and sporadic hotspots in the Lake Chad Basin due to a resurgent Boko Haram in Nigeria. The vulnerability analysis, enabled by current constant hotspots, suggests various administrative regions where new populations are most exposed to jihadist-related activity. This can better inform U.S., French, and regional stakeholders on where to focus additional counterterrorism programs. Moreover, answers to each spatial question point to a trend of greater instability in the years to come, one reinforced by the conflict growth estimates through 2021.

ATTACKS ON CIVILIANS, 2012-2021 (EST.)



ATTACKS ON SECURITY FORCES, 2012-2021 (EST.)



LIMITATIONS

Population rasters are UN-adjusted estimates for Burkina Faso (2014), Mali (2020), and Niger (2015). These estimates likely do not reflect internal displacement or migration due to increased conflict in recent years. Moreover, the reliance of crowdsourced data to enable the vulnerability analysis assumes the risk of potential omissions or errors in precise locations of sites by reporting parties.

ADDITIONAL INFORMATION

Cartographer: Nicholas A. Glavin

Date: 26 June 2019

Sources: ACLED, WorldPop, OpenStreetMap, GADM, ESRI

Projection: Africa Albers Equal Area Conic

Course: GIS0102: Advanced Geospatial Modeling

Header Photo: G5 Sahel

The views expressed are the cartographer's own and do not represent the policy or position of the U.S. Government.