



Pastoralists-farmers' conflicts in Nigeria's mid-Benue Trough: Socio-ecological drivers and pathways to addressing the conflicts.

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Violent conflicts related to pastoralists-farmers' interactions in Nigeria have assumed an unprecedented dimension, causing loss of lives and livelihoods. The mid-Benue trough (Benue and Taraba States) has suffered most from the conflicts. This study aims to provide knowledge on the socio-ecological drivers of pastoralists-farmers' conflicts in the mid-Benue trough from the year 2000 to 2020 and to identify pathways to solving them. First, data from the Armed Conflict Location and Event Data Project were used to map the conflicts. Second, to understand the nexus of climate change, land use and the conflicts, the study analyzed satellite data of Land Surface Temperature (LST) as a proxy for climate change, using data from the Moderate-Resolution Imaging Spectroradiometer (MODIS) satellite and Land Use Land Cover (LULC), using LandSat 7 ETM and LandSat 8 ETM+ data, then linked them to the mapped conflicts. Third, to understand causes and impacts of the conflict on pastoralists and farmers' livelihoods, 100 interviews were conducted, 50 for each group and analyzed using content analysis and descriptive statistics. Results showed that there were 2532 fatalities from 309 conflict events between pastoralists and farmers. The incidents exhibited statistically significant clustering and were minimal between the year 2000 and 2012, increasing gradually until the year 2013 when it began to rise geometrically. The Getis-Ord Gi hotspot analysis revealed the conflict hotspots to include Agatu, Oturkpo, Gwer East and Gashaka Local Government Areas. The results from the LST analysis showed that the area coverage of high LST increased from 30 percent in 2000 to 38 percent in 2020, while extremely high LST area also increased from 14 to 16 percent. A significantly high percentage of the conflicts (87 percent) occurred in areas with high LST (>30°C). In addition, the LULC analyses showed that built-up land area increased by 35 km² (0.1 percent) and dense forests reduced by 798 km² (0.1 percent). Notably, shrublands and grasslands, which are the resource domains of the pastoralists reduced by 11,716 km² (13.1 percent) and croplands of farmers increased by 12,316 km² (13.8 percent). This presents an apparent transition of LULC from shrublands and grasslands to croplands in the area. Further analyses showed that 63 percent of the conflicts occurred in croplands and 16 percent in shrublands and grasslands. Hence, the reduction of land resource available to pastoralists and their subsequent cropland encroachment were identified as major causes of the conflict. It was therefore concluded that land development for other purposes is a major driver of pastoralists-farmers' conflicts in the study area. There is thus a need to integrate conflict maps, LST and LULC dynamics to support dialogue, land use planning and policy formulation for sustainable land management to guide pastoral and farming activities.

