

Flood Event Trends: The Confluence Of Benue And Gongola Rivers, Numan, Adamawa State, Nigeria.

Iliya, J. J.¹, Yaro, H.², Mamza, W.S.³, Adamu, M.M.¹, Folayan, O.O⁴

1. National Centre for Remote Sensing, Jos,
 2. Zastal, Kashere
 3. National Cereals Research Institute, Riyom, Plateau State
 4. Advanced Aircraft Engineering Laboratory, Gusau, Zamfara State.
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Abstract

The study titled "Flood event Trends: Study of the Confluence of Rivers Benue and Gongola, Numan, Adamawa State, Nigeria", is aimed at comparing the impact of flood events in the confluence town, Numan due to rising high water levels and heavy rainfalls in 2012, 2018 and 2020, which has caused devastating effects on land use and landcover. Numan is one of the local government areas affected by the annual floods in Adamawa state; considered a flood prone area due to its proximity to the banks of the Benue and Gongola Rivers. There were few people killed, but many were displaced and whose structures were affected; More so, agricultural product as well as environment were seriously affected. Digital satellite remote sensing and Geographic Information Systems were employed to determine the 2012, 2018 and 2020 flood extent in the study area, and the processes executed using ArcGIS ArcMap and Microsoft Excell software. Landsat imageries covering the study area (Numan) were acquired from Earth explorer, covering 2012, 2018, 2020. The Landsat imageries downloaded from the GLCF website are in 11 bands, the appropriate bands (bands 5, 4 and 3) were selected stacked as green, red, and blue bands. The results obtained from the research indicates Flood Inundated area in 2012 is 4,208.61(Ha), at 150m; Flood Inundated area in 2018 is 3,272.49 (Ha) at 145, and Flood Inundated area in 2020 is 2,282.34 (Ha) at 140.

Keywords: Numan, Flooding, Inundation, Remote Sensing, Disaster

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