



Book of Abstract



**ASSOCIATION OF NIGERIAN GEOGRAPHERS
ANNUAL CONFERENCE**

KASU 2019

**GEOGRAPHY AND
DISASTER MANAGEMENT**

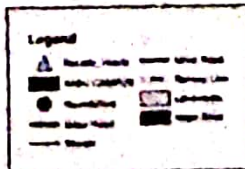
**DATE: SUNDAY 13TH - THURSDAY 17TH OCTOBER, 2019
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FOR ANG @ 60.

ANG AT A GLANCE

The Association of Nigerian Geographers (ANG), formerly Nigerian Geographical Association (NGA) is one of the earliest umbrella academic Associations in Nigeria having been formed in 1957. It is a non-profit, scientific and scholarly Association that aims at advancing the study of Geography in Nigeria. Its members share interests in the theory, methods and practice of geography and geographic education. Currently, the Association has more than 1,000 members from all parts of Nigeria and beyond, and represent the interests of Geographers in the country. ANG members are geographers and related professionals who work in the public, private, and academic sectors. They work in a wide range of careers, such as university scholars, lecturers in colleges, teachers of geography, researchers and analysts, planners, cartographers, scientists, non-profit workers, entrepreneurs, businesspeople, bankers, graduate students, retirees and many others.

The Nigerian Geographical Journal (NGJ) and is the Association's flagship Journal. It has been the major publication outlet of Geographers in Nigeria since the formation of the Association. Annual Conferences Since its formation, the Association continues to hold its conferences annually on different campuses across the country. The Conferences offer opportunities for geographers to present, especially, their research outputs on issues from local to global scale, and on topics in the physical, human and development geography and as well as on methodological issues and technologies such as the Remote Sensing and the Geographical Information System (RS/GIS).

Methodology Lectures are now prominent features during the Conferences so are Field Trips. Moreover, in order to catch-them-young, students of secondary schools are treated to National Geo-Quiz and also Poster Competitions. At these Annual Conferences, Annual General Meetings (AGM) are held. During such meetings, matters of concern to the geography community are openly discussed and decisions taken. Thus, the Annual Conferences are excellent avenues to, not only present one's own research works, they also provide avenues for the young and the old to network.

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47. Climate Change And Conflict In Nigeria: An Empirical Examination Of The Conflict Between Fulani Herdsmen And Farmers In Three Communities In Kura Local Government Kano State. **Salisu Lawal Halliru**
48. Disaster And Conflict: A Geographical Perspective In Some Selected Local Government Areas Of Southern Senatorial Zone, Kaduna State, Nigeria. **Akaito Joshua Aramgo, Jibril Lubabatu Bello and Haruna Abba**
49. An Assessment Of Anthropogenic Hazards In Gombe State: A Criminality Perspective. **Ahmad Abdullahi**
50. Dust Occurrence And Flight Disruption, A Case Study Of Nnamdi Azikiwe International Airport Abuja. **Aweda E. D., Abdulazeez A. A**
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52. Boko Haram In The Nigerian Northeast: A Socioeconomic Autopsy Of The Effects. **Mala M. Daura, John O. Odihi And Abbas M. Gsilanbe**
53. Application Of Geographic Techniques In Determining The Qiblah: A Blueprint For Islamic Faithful. **Nazifi Umar and Sani Aliyu Umar**

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63. Vulnerability Assessment Of Soil Erosion In Peri Urban Areas Of Metropolitan Kano: A Sociological Approach. **Mallam I. Ph. D**
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67. Water Vapour Transport In Relation To Rainfall Over Nigeria Using Surface Data. **Them Patricia Nnenna.**
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70. Hotspots Mobility Theory (Hmt), **Muzammil Ahmed Khalid**
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144. Assessment Of The Effect Of Climate Change On Selected Weather Elements In Zaria, Kaduna State Of Nigeria. **Mohammed, H; Jaro, I.M; Iguisi, E.O; Ibrahim, A.A; Tasiu, M; Akhadolor, M.O; Usman, J.G**
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181. Greenhouse Gas Emission From Municipal Solid Waste Stream Of Kano Metropolis, Kano State, Nigeria. **Danladi Musa**
182. Productivity Of Rice (Oryza Sativa) As Influenced By Weather Parameters In Kano River Irrigation Project, Kano State, Nigeria. **A.S. Tanko And A.A. Abukur**
183. Assessment Of Smallholder Farmers' Adaptation Strategies To Climate Change In Jama'are Local Government Area Of Bauchi State. **Danjuma Yahaya, Bello Gambo (Ph.D) and Mohammed Tela**
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HOTSPOTS MOBILITY THEORY (HMT)

Muzammil Ahmed Khalid,
Department of Geography, Faculty of Earth and Environmental Sciences, Bayero University Kano, Nigeria.

ABSTRACTS
Hazards posed by earthquakes, volcanoes and landslides have always been with us (Montgomery, 2008). Hotspots are isolated areas of volcanic activities usually not associated with plate boundaries. They are attributed to rising columns of warm mantle material (plumes) originating at the base of the mantle. They are regions deep within the Earth's mantle from which heat rises through the process of convection. But in this theory, hotspots are referred to any geologically active, unstable and vulnerable portion of the earth i.e. areas more prone to seismic events, volcanic eruptions, folding, faulting, mass movement etc. The pattern of hotspots mobility over the surface of the earth is not uniform. They are aligned or attributed to some portions of the earth's surface. Natural disasters such as volcanic eruption, earthquake, landslide, tsunami etc. are closely related to the mobility of the hotspots over space and time. Plate margins, mountainous regions and highly elevated lands are mostly geologically unstable and vulnerable parts of the world today compared to other parts of the world. The theory discovered that places overlain by new geological formations are more prone or vulnerable to geologic instability and natural disasters like volcanic eruptions, earthquake, landslides, tsunami etc. Likewise, places overlain by Pre-Cambrian and Cambrian formations (either overlain or exposed) are more stable and less vulnerable geologically than other areas overlain by post-Cambrian formations. Younger geological formations are more geologically unstable than older formations. Hotspots move over the geological periods from one geo-location to another and they would continue to shift in the future. Stress-strain imposed by the juxtaposition of land and water bodies is controlling the shift of the triggers inducing the mobility of hotspots.

Key words: hotspots, vulnerable areas, seismic events, volcanic eruptions

A REVIEW OF GPS-BASED ZENITH PATH DELAY ESTIMATION AND ITS APPLICATION IN NIGERIA

Ibrahim, J. S., Danlami D. and Opaluwa Y. D.
Department of Surveying and Geoinformatics, Federal University of Technology Minna, Nigeria
Corresponding author: james.shekwoledu35@gmail.com

ABSTRACT
As the GPS signals traverse the tropospheric layers to the receivers on the ground, they are refracted and bend, thereby causing delay on their arrival time and in turns affecting positioning accuracy in the horizontal and vertical components. This delay which is one of the sources of positioning errors in GPS observation is known as Zenith Path Delay (ZPD). Estimation of ZPD during GPS data analysis is crucial for improving GPS positioning accuracy and assimilation into Numerical Weather Prediction (NWP) models for improved weather outlook and climate studies. This is remarkable, especially for tropical region noted for highly dynamic weather and climate system due to high moisture contents. However, the development of GPS infrastructure in Nigeria is relatively new. The NIGERIAN reference GNSS NETWORK (NIGNET) is a network of GPS continuously operating reference stations (CORS) which was set up as a surveying infrastructure by the Federal Government of Nigeria through the Office of the Surveyor General of the Federation in about a decade ago. Nevertheless, there exist very limited numbers of literatures discussing GPS-based estimation of ZPD and its applications over Nigeria. Therefore, this paper presents a review of literature on ZPD estimation and its applications over Nigeria. A systematic review approach is adopted, literature materials were downloaded from five (5) web-based archives: Google Scholar, web of science, Ebesco, Scopus and Pubmed.

Keywords: Zenith Path Delay, Nignet, GPS CORS, Numerical Weather Prediction

A REVIEW OF APPLICATION OF UNMANNED AERIAL SYSTEM IN MAPPING DISASTER AREA

Muhammad Bala, I Musa Ahmad²
1. Department of Surveying and Geoinformatics, school of Environmental Technology, Niger State polytechnic Zungeru, Niger State. bashmoh2007@yahoo.com, 08127751270
2. Department of Surveying and Geoinformatics, School of Environmental Technology, Federal University of Technology Minna, amusa22@gmail.com 09035314040

ABSTRACT
Besides the commercial and military application of drones, UAVs can be used efficiently to support emergency management. Information is vital and plays an important role in crisis management and relief effort for natural and man-made disaster situations. Given their flight altitude and other properties, unmanned aerial vehicle (UAV) provide new and interesting edge on the data collection for disaster management. UAV fashioned a lot of advantages among which are the gains in terms of time and human resources, as they can free rescue teams from time consuming data collection tasks and assist research operations with more insightful and precise guidance courtesy of advanced sensing capabilities. This paper focuses on operational and application of drone in disaster management mainly on activity immediately after the occurrence of a disaster. The paper focuses on 6 disasters: floods, earthquakes, wildfires, hazardous chemical spills, structural damage and nuclear accident. An earthquake is a rapid escalating disaster, where, many times, there is no other way for a rapid damage assessment than aerial survey. Drones can be deployed quickly, generate high-resolution and 3D mapping, identify hotspot areas that have sustained the most damage and upload the data in real time to coordinate relief efforts. Floods are typical for a slow onset disaster, managing floods is a very complex and difficult task. It requires continuous monitoring of dykes, flooded and threatened areas. Drone can help managers largely keeping an area under observation. Forest fires are disasters, where the tactical application of drone is already well developed. Drone can be used for fire detection, intervention monitoring and also for post-fire monitoring. In case of nuclear accident or hazardous material leakage drone is also a very effective or can be the only one tool for supporting disaster management.

Keywords: Disaster management, floods, earthquakes, hazardous chemical spills, wildfires, Drone.

FIRE SAFETY AWARENESS AND PREPAREDNESS AMONG TERTIARY INSTITUTIONS IN KANO

Karimatu Umar Adamu, Abba Sani Abdullahi, Mahmud Zubair Imam & Dr Hindatu Abdulkadir
Geography Department, Sa'adatRimi College of Education Kumbotso, PMB 3218 Kano, Nigeria
08065674310 karimatumaradamu@gmail.com

ABSTRACT
Fire outbreak is one the sudden and common disasters that causes human, material, economic and environmental losses. Fire safety measures includes those that are intended to prevent ignition of fire and those that are used to limit the development of the effects of fire after it starts. The objectives of this paper is to assess awareness of fire safety among students and the level of preparedness of fire outbreak in four tertiary institutions in Kano. The population is the Geography students in Sa'adatRimi College of Education Kumbotso, Federal College of Education, Kano; Aminu Kano School of Islamic Legal Studies and Bayero University Kano; and heads of the works department in the institutions. Simple random sampling would be used to select fifty respondents from each of tertiary institution using purposive sampling making a total of 200 respondents. Multiple sources of evidence would be used in data collection, namely literature review, questionnaire, observation and interviews. Data would be analyzed using descriptive statistics and presented in percentages and tables. Recommendation on how to address the challenges would be raised.

Key words : Fire safety, Awareness, preparedness, Tertiary institutions