

Analysis of the Correlation between Floods and Earthquake using InSAR Technique: A case study of South Western Nigeria.

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South Western Nigeria is a region known for its geological and hydrological diversity, making it susceptible to natural disaster such as floods and earthquakes. While earthquakes have historically been considered infrequent in this region, recent occurrences may indicate a changing geological land scape [1]. On the other hand, the region experiences periodic flooding events due to its complex river systems, topography and climate. [2]. This research will investigate the relationship between floods and earthquakes in Western Nigeria, employing advanced Interferometric Synthetic Aperture Radar (InSAR) technology. The research aims to contribute to a deeper understanding of the dynamic interactions between natural hazards in a region characterized by complex geological and hydrological conditions. Through the utilization of InSAR, ground deformation associated with both flooding and earthquake is mentioned with high precision, offering a novel perspective on the temporal and spatial relationship between this phenomena. InSAR provides a valuable tool for remotely sensing and quantifying ground displacements, enabling the identification of potential correlations and patterns. [3]. This research involves the collection of InSAR data and it's integration with meteorological, hydrological, seismic and soil datasets. The findings from this research will have practical implications for disaster preparedness, mitigation and response strategies in Western Nigeria. By exposing the complex relationship between floods and earthquakes. This research will contribute to the broader field of geohazards research and underscores the significance of employing cutting-edge technologies like InSAR for a comprehensive understanding of natural hazards dynamics in vulnerable regions.

References

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