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Abstract
A Rock fall-debris avalanche occurred in mountains close Imiande-Ukusu Itulygh village of Benue state on 3 November 2010 after a night of unremitting heavy downpour. Some foreign and local network channels had reported the event of 3 November as a volcanic activity while others had reported it as an earthquake. These reports triggered a great deal of emotions and interests among the Nigerian populace. As a response, universities, the Geological Survey of Nigeria, non-governmental organizations and independent experts rushed to the disaster area to investigate the mystery of the purported seismicity. Results of these investigations have shown that it was a massive slope movement probably unprecedented in the history of landslides in this mountainous area but certainly unconnected to any form of seismic activity. An estimated 100M m3 of rock and debris was moved more than 2km from the slip surface of the slide at 600m above sea level to the toe in the valley below in a few minutes. The materials range from mud and soil debris to blocks of rocks up to 20m in diameter. The grain size of moved material tended to increase upslope and closer to the slide though it tended to decrease again close to and at the source area. The angle of slip surface ranged from 65° at the top to less than 1° at the toe. Nature and composition of the basement bedrock with foliation planes dipping in the direction of slope and with dominant joint sets oriented perpendicular to the foliation, along with the nature of weathered material and high relief and slope angles were disposing factors. Heavy rainfall at the tail end of the rainy season was the triggering mechanism. 2 persons were killed and resources worth over 30 million dollars were destroyed. The human casualty is low because the rock fall-debris avalanche occurred at an area very far from residential zones. Because the landslide occurred few hours after an intense rainfall it signifies sufficient lag time for the lubrication of the slip surface. Also days of intense precipitation that predates the landslide might have helped the saturation of the slope materials, resulting to increased pore pressure (i.e. reduced shear strength) and seepage pressure (i.e. increased shear stress).

Keywords Landslide • Debris Avalanche • Rainfall • Imiande-Ukusu Itulygh • Nigeria