

# **R01 An Overview Of Landslide Problems In Nigeria, West Africa**

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## **■ Introduction**

Nigeria, the largest and most populous country in Black Africa, is located in the tropics within approximately longitudes 2° 30' and 15° 00'E and latitudes 4° 00' and 14° 00'N. The area is about 923,768 sq km, while the population is estimated at 120 million.

Although only a few catastrophic landslides have been recorded, slope movements are quite common and located mostly in the gully areas, road cuttings, rivers bank, steep slopes, and highway embankments. Studies have associated their causes to topography, geology, hydrology, human activities, and several combinations of these. Landslide damage in Nigeria has been assessed to be considerably high, and concerns are that population increase and a consequent extra pressure on land may make landslide occurrence more frequent and more catastrophic.

## **■ Short description of a few major landslides**

In October 21, 1976 a landslide, which caused substantial economic loss and disrupted public life, occurred at Ile-Ife, a major city in Nigeria. It took the form of a debris flow whose scar occupied 0.5 ha with a debris yield of 3,500 m<sup>3</sup> and debris deposit covering about 0.53 ha. Although the scar of the flow covered only 0.5 ha, considerable economic trees were destroyed.

A huge storm-induced debris flow of September 24 and 29, 1979, which was responsible for substantial economic loss, occurred along the Akovolwo ranges. Two movements developed on bedrock slopes covered by colluvium no more than 2m thick. Each started as a slip and evolved into a frightening debris flow. The width of the debris flow was about 50 m at the mid-channel, widening to over 100 m at the foot, with the length about 2 km.

In August 17, 2000 a catastrophic landslide, which was widely reported in the media, occurred at one of the major farming communities in southern Nigeria. The landslide, which occurred after a prolonged and intense rainfall, was so rapid, so unforgiving, that it buried nearly half of the local community, killed 23 persons, and left dozens more with different levels of physical and psychological disability in its wake.

## **■ Social and economic impacts**

Besides the loss of human lives, considerable economic resources and farmlands have been lost to landslides. Farming constitutes the main livelihood of people in the affected areas. With farming jeopardized, at a constantly increasing rate by landslides, there is an obvious threat to human survival.

Other social impacts include the perpetual fear in which the people who live in the affected areas are subjected. Many have had to abandon their homes to menacing landslides. The people have often mistaken the deafening noise of debris flow that reached avalanche speed for earthquakes.

## **■ Effort at checking landslide menace**

At present, there is little the Government and others are doing to check the menace of landslides in Nigeria. Two reasons accounting for this state of affair seem apparent: (1) the country is very poor and as such, has yet to acquire the necessary capabilities for disaster prevention or mitigation (2) very few personnel seem to have interest or technical training in landslide problems due to lack of incentive and adequate facilities for training. The result is that no terrain evaluation is available to guide land use planning or to highlight areas of potential instability.