

## **Impact of Soil Erosion on Land Degradation in Uga Southeastern Nigeria**

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### **Abstract**

This study was to investigate the causes and hazards of soil erosion in Uga, Anambra State as the area is always having the problem of erosion. This study was carried out in some selected erosion sites in Uga. The study investigated the impact of soil erosion on land degradation and its environmental hazards in Uga Southeastern Nigeria. Two profile pits were prepared, one on severely degraded (eroded) sites and the other on less severely degraded (eroded) sites. They were morphologically described and sampled. Surface soil samples were collected from the erosion sites that were controlled at the depth of (0-25cm) and (25-50cm) to check the effect of the control on the soils. Some physical and chemical properties of the soil were determined. Morphologically, the soils were deep and well drained with no concretions or mottles. The colour variations ranged from brown (7.5YR 4/4) to dark reddish brown 7.5 R 3/3 for the profile pits. The soils varied in texture from fine loamy sand to sandy clay loam. The structures varied from hard to weak coarse crumb to friable. The Bulk Density values (B.D) were relatively high 1.4g/cm<sup>2</sup> – 1.6g/cm<sup>3</sup>. The infiltration was rapid ranging from 10cm – 150cm<sup>2</sup>. Chemically, they were strongly acidic and low in nutrient status. The pH was low between 3-9-5.1. Nitrogen ranged from 0.01 – 0.12%. Erosion affected significantly the phosphorus, pH and Al<sup>3+</sup> Heavy metals values were low. Other forms of land degradation identified in the area were bush burning, sand quarrying, deforestation etc. Management practices such as the use of organic amendments, minimum tillage and crop rotation could help in the conservation of the soils and ensure food security for further generations.

**Keywords:** Soil Erosion