

# EFFECTS OF SAND MINING ACTIVITIES ON LAND IN AGRAIAN COMMUNITIES OF OGUN STATE, NIGERIA

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## **Abstract**

This study examined the effects of sand mining activities of rural people on agricultural land in Ogun State, Nigeria. A multi-stage sampling technique was used to select 240 respondents from 24 rural communities in the state. Data on personal characteristics, livelihood options and their peculiarities were collected using interview guides. Soil samples were also collected and analysed to evaluate possible chemical degradation level. Results showed that 67.9 percent of the respondents were male, 65.4 percent were married with a mean age of 47.9 years and 36.7 percent had primary education. Most of the respondents ranked sand mining and gravel mining as very severe; 74.2% and 71.6% respectively, among livelihood activities affecting land. Changes observed due to sand mining included soil nutrient depletion (78.8%), low yield (72.2%), gully on farmland (70%) and diminished vegetation cover (66.7%). The soil analyses from sand mining sites showed that the mean of total nitrogen was low (0.08%), calcium was low (3.6cmolkg<sup>-1</sup>) and sodium was low (1.1cmolkg<sup>-1</sup>). Conversely, sites where sand mining were not intense showed that total nitrogen was medium (0.18%), calcium was medium (4.3 cmolkg<sup>-1</sup>) and sodium was high (1.4) cmolkg<sup>-1</sup>. There were significant differences between calcium deterioration at sand mining sites and non-sand mining sites Imeko and Ijebu-igbo ( $t = 17.80$  and  $13.00$   $p < 0.05$ ). There were significant differences between sodium deterioration at sand mining sites and non-sand mining sites Opeji and Ijebu-igbo ( $t = 25.00$  and  $5.00$   $p < 0.05$ ). Conclusively, sand mining contribute to land degradation in agrarian community by destroying the soil surface and structure as well as declining the nutrient status of agricultural land. It is recommended that trees and shrubs that could help regenerate degraded land and prevent erosion should be planted, educating the rural people on alternative livelihood activities that are less degrading the agricultural land.

**KEYWORDS:** Sand mining, degradation, livelihood activities, agricultural land, soil nutrients