

**AN ASSESSMENT OF IMPACT OF CRUDE OIL EXPLORATION ON SOIL CHARACTERISTICS IN PARTS OF
OGONI REGION, RIVERS STATE, NIGERIA**

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Abstract

The study aim at examining the impact of crude oil exploitation on the soil environment of Ogoni region also made recommendation on the current social and environmental problems. Composite soil samples were collected at two depths: 0-15cm (surface soils) and 15-30cm (subsurface soils) along different position of landscape in the fore study area. Samples were analyzed in the laboratory within five days of collection. ANOVA was used to confirm that both soil chemical and physical properties significantly vary in the study locations. The result revealed that sand, sill and clay contains significantly vary in eleme, Tai, Khana and Gokhana. Based on the locations where the soils were sampled the result indicate that the soil vary widely in chemical characteristics in Eleme ($F\text{-ratio}=1674.16$; $p<0.01$; $F\text{-critical}=1.88$) ; Tai, Khana and Gokhana against the theoretical value. The soils of the study area were declared contaminated by heavy metals and hydrocarbon toxicity. The study therefore recommended indigineous participatory approach strategies for the sustainable crude oil exploitation in Nigeria oil-rich.

Keywords: *Soils, Exploration, Degradation, assessment, physico-chemical*