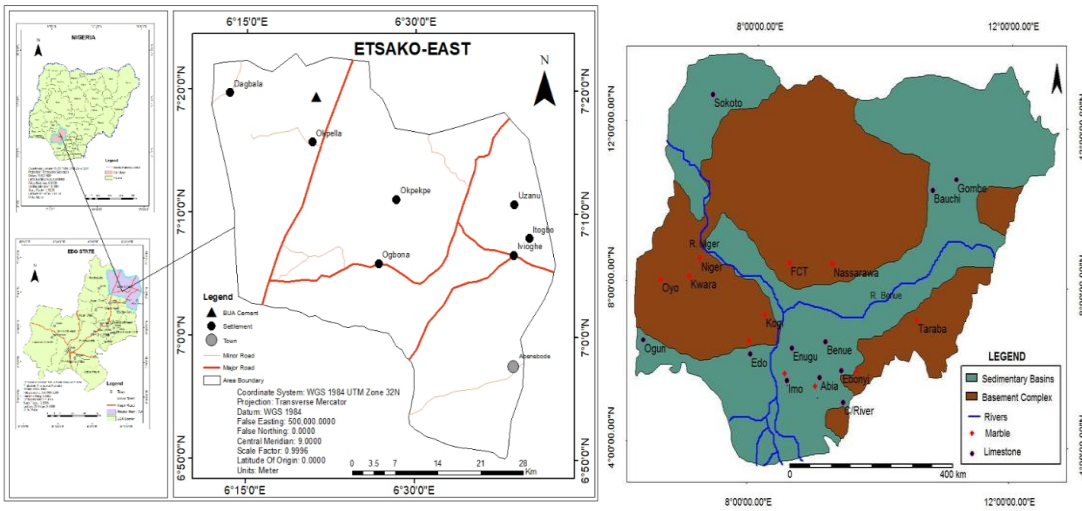




The correlation analysis revealed strong positive relationships among soil degradation, reduced crop yields, and disrupted farming practices ($r = 0.694\text{--}0.782$). Regression results indicated that limestone mining significantly

farmers' perceptions and the combined effects on soil quality, crop yield, and agricultural practices within the

16'12" N latitude and 6°20'46"E longitude. It is a major gateway between the northern and southern parts of



Source: GIS Lab, Nasarawa State University, 2026; Fatoye and Gideon, 2013.

$$n = \frac{N}{1 + N(e)^2}$$

$$n = \frac{500,669}{1 + 500,669(0.05)^2}$$

$$n = \frac{500,669}{1 + 500,669(0.0025)}$$

$$n = \frac{500,669}{1252.67}$$

$$n \approx 400$$

ques. Descriptive statistics such as frequency distribution, percentages, and cross-tabulation were used to summarize respondents' perceptions. Inferential analysis included correlation and regression techniques to

The methodology adopted in this study is appropriate and justified based on the nature, objectives, and scope of the research. The use of a survey research design is suitable because the study primarily seeks to examine
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 extremely negative to very positive) is particularly appropriate, as it enables the measurement of the intensity of
 respondents' opinions, which is essential in perception-based research (Likert, 1932).

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 of descriptive statistics (mean scores and standard deviations) is justified as it provides a clear summary of
 respondents' perceptions and highlights the overall trends in the data. These measures help to interpret the level
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presents respondents' perceptions regarding the effects of limestone mining on crop production in Okpella. The

presents the descriptive statistics on the perceived impact of limestone mining on crop production in the study

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A correlation analysis was conducted to examine the relationship between limestone mining activities and crop

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) reinforce these perceptions, with low mean scores across variables indicating strong agreement on the negative

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The correlation analysis further demonstrates strong positive relationships among soil degradation, reduced crop yields, and disruption of agricultural practices ($r = 0.694\text{--}0.782$). This indicates that these variables are

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(3), 290–297.
(12), 2888–2905.
(1), 65–73.
(3–4), 405–414.
(3), 81–94.



(1), 1–7.

(140), 1–55.

19. Fatoye, F. B., and Gideon, Y. B. (2013). Geology and occurrences of limestone and marble in Nigeria. *Geology*, 3(11), 60–65.