

# Effects of Logging on Stand Damage in the Rainforest of South-eastern Nigeria

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## Abstract

*Study was carried out in the tropical high forest of Iwuru community in south-eastern Nigeria to examine the extent of stand damage to unlogged trees at different logging intensities. Twenty four plots of 1 ha each were laid and were classified as lightly logged, moderately logged, severely logged and unlogged (control). Each category had six plots. Data on level of tree damage was taken and calibrated into various classes as "good", "minimal", "moderate", and "severe" damage. Means, analysis of variance and the post hoc test were the statistical models employed to analyze data. A positive correlation was observed between logging intensities and damage level to stands of non-logged trees with the number of trees destroyed increasing with logging intensity. Data on stocking indicated that the unlogged plot had a statistical mean of 41.5833 and a sum of 38.8%, which was the highest. The lowest statistical mean of 12.2083 and the sum of 11.4% were for severely logged plots, indicating that the population of unlogged trees diminished with increasing logging intensity. Also, the large F value (11.971) and the low P value (0.000) indicated that logging intensity had significant contribution to the extent of damage to unlogged trees in the various sample plots. The post hoc test gave a value of 0.839, which is positively significant, indicating a significant, contribution of logging intensities to the damage done to unlogged trees.*