

# **Variation in Tree Diversity within Natural Green break Forests in Bulolo Pine Plantation**

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## **Abstract**

This study was undertaken to understand the relationship between altitude and tree diversity in a natural green break forests within the pine plantations in Bulolo, Morobe Province. It is understood that tree diversity plays a critical role in plant performance and for multiple forest functions and ecosystem stability.

The preliminary results revealed that there exists significant difference on tree diversity with increase in elevation. Diversity was highest at 900 m above sea level depicting a humped-shaped trend while highest number of individuals were recorded at 1,495 m. a.s.l. suggesting a clumped distribution patterns. Beta diversity indicated highest dissimilarities (97%) between forest plots at 900 m a.s.l. versus forest plot at 1,495 m. a.s.l.

Data from this study contributed to the knowledge of tree diversity across different landscapes (e.g. natural green breaks) in the Bulolo pine plantation.