

# CHANGES IN FOREST STRUCTURES AND TREE SPECIES DIVERSITY OF EVERGREEN BROADLEAF FOREST IN CORE ZONE IN CUC PHUONG NATIONAL PARK

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## Summary

This study used the data of three permanent plots, each plot has a square shape and covering 1 ha (100 m x 100 m). All trees with a diameter from 6 cm were identified by species and permanently marked using a white metal tag. The results showed that the density of forest stands decreased after six years, despite the presence of regenerated trees, a total of 2,326 trees surveyed in 2019, 70 fewer than in 2013. The mean values for both diameter and tree height increased after six years. Regarding the composition of tree species, in two surveys, the number of species participating in the composition formula was only from 2 to 5 species and the dominant species in 2013 and 2019 did not change greatly. The dominant species group appeared in all 3 forest states in the two surveys. The number of trees per DBH class of 3 plots and height class of 2 out of 3 plots followed the three-parameter Weibull function. In terms of tree species diversity, all indices increased after six years, except Simpson index in plot 2 and plot 3 and the forest state IIIB was the most diverse, followed by the forest state IIIA3 and less diverse was forest state IIIA1.

**Keywords:** *Tree species diversity, evergreen broadleaf forest, Cuc Phuong National Park, changes in forest structure, the three-parameter Weibull function.*