

---

---

# STRUCTURE AND TREE SPECIES DIVERSITY OF EVERGREEN BROADLEAF FORESTS AFTER LOGGING AT KBANG DISTRICT, GIALAI PROVINCE

Cao Thi Thu Hien<sup>1</sup>, Nguyen Hong Hai<sup>2</sup>

<sup>1,2</sup>*Vietnam National University of Forestry*

## SUMMARY

Selective logging is applied commonly in South-east asia countries and the world. Numerous studies are carried out studying effect of selective logging with different intensities on forest structure and species diversity. However, recovery capacity of forests in term of time is still in controversy. In this study, we used 9 study 1-ha plots based on three different forest types such as unlogged, low intensity logging and high intensity logging after 30 years of logging in Kbang district, Gia Lai province. Methods of profile diversity, rarefaction and spatial pattern were used to study the structure and diversity of forest tree species. The results showed that the forest statuses were still rich forests after low and high intensity logging. The frequency distribution of the diameter dramatically declined with the ascending diameter classes, followed the Beta distribution and the number of trees mainly in diameter of 20 cm. The frequency distribution of the height were all skewed to the left of the graph, which followed the Weibull distribution with the height of the trees focused on 14 and 18 m. Mean of tree height and diameter and species diversity were not significantly different in three forest types. The Number of tree species tended to increase over 1 ha plot, especially on two logged forests. Tree species with aggregated distribution dominated among all three forests and tended to increase with highly disturbed forests. The findings shown that forest structure was well recovered after 30 years of logging and selective logging with appropriate intensity is promising economical-technical solution for sustainable forest management.

**Keywords:** Evergreen broadleaf forest, forest structure, Gia Lai, selective logging, tree species diversity.

**Ngày nhận bài** : 03/5/2018

**Ngày phản biện** : 22/8/2018

**Ngày quyết định đăng** : 03/9/2018