

Ronnarat Sirimagorn 2009: The Effects of Prescribed Burning on Habitat Use of Large Herbivores in Huai Kha Khaeng Wildlife Sanctuary, Uthai Thani Province. Master of Science (Forestry), Major Field: Forest Biology, Department of Forest Biology. Thesis Adviser: Assistant Professor Ronglarp Sukmasuang, Ph.D. 133 pages.

This study had 2 objectives. There were to investigate the change of sapling, seedling and biomass of the plant species that collected data during February and October 2006. The habitat use of large herbivorous mammals were also investigated in the dry dipterocarp (DD) and the mixed deciduous (MD) forests to compare between burned and unburned areas indexed by the animals' footprint. The habitat use data were collected during March 2006 and May 2007. The results reflected that, after prescribed burning, 33.33% number of sapling plant species and 56.95% qualitative of sapling plant species in the burned DD had decreased. In case of the burned MD, 18.18% number of sapling plant species and 23.57% qualitative of sapling plant species were decreased. In case of seedling species, the results showed 2.71% and 28.74% decreased in number of species and qualitative respectively in the burned DD. The result also showed decreasing in number of species and qualitative of all seedling plant in the burned MD with 25.33 and 6.52 % respectively. There were no changes in number of grass species in both of the burned DD and the burned MD. Nevertheless, biomass of all grass species were 80.01 and 48.39 % decreased in the burned DD and the burned MD respectively. After prescribed burning in the late of February, 2006 compared in the differences areas, the results reflected that sambar deer, barking deer, wild boar and banteng used the burned DD areas more than the unburned DD areas with 40.00 23.79, 56.33 and 45.28 % respectively. In case of the MD, the results reflected that sambar deer, barking deer and wild boar used the burned MD habitat more than the unburned MD habitat with 16.14, 216.8 and 10.25% respectively. After prescribed burning in the late of February, 2007 compared in the same area, it reflected more presented tracks of sambar deer, barking deer, wild boar and banteng in the burned DD habitat than the unburned DD habitat with 25% 119.23% 0% and 193.33% respectively. In case of the MD habitat, it reflected more presented tracks of sambar deer, barking deer, wild boar and banteng in the burned MD habitat more than the unburned MD habitat with 65.57% 75.75% 18.75% and 222.22% respectively. After prescribed burned in 2007, compared the habitat used of the animal species in the different places, the results showed that barking deer, wild boar and banteng used the burned DD more than the unburned DD with 14.04, 34.48 and 38.64 % respectively, excepted sambar deer used the unburned DD habitat more than the burned DD habitat with 0.97%. In case of MD, it reflected that sambar deer, barking deer, wild boar and banteng used the burned MD habitat more than the unburned MD habitat with 0.99, 22.41, and 21.05 and 24.14 % respectively.

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Thesis Advisor's signature

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