

Suramongkon Siripon 2014: Impact of Land Use Change on Wild Elephant Habitat in Salakpra Wildlife Sanctuary, Kanchanaburi Province. Master of Science (Forest Biological Science), Major Field : Forest Biological Science, Department of Forest Biology. Thesis Advisor: Professor Yongyut Trisurat, D.Tech.Sc. 123 pages.

The objectives of the study entitled Impact of Land Use Change on Wild Elephant Habitat at Salakpra Wildlife Sanctuary, Kanchanaburi Province were 1) to predict land use change between 2011 and 2027 using CLUE-s model under the trend of land use change derived from Markov Chain Model 2) to generate habitat suitability area for wild elephant using presence and absence data, logistic regression technique and 3) to compare suitable habitat for wild elephant between 2011 and 2027. This study categorized future land uses into three scenarios: 1) no restriction area and poor enforcement, 2) 20% of deforestation occurs along 1.5 km. inner buffer, which has less than 20 degree slope, and 3) strict prevention measures or no encroachment inside the sanctuary.

The result of Markov Chain model indicated that deciduous forest areas in 2027 will decrease 3,927 ha of this figure, deciduous forest inside the Salakpra wildlife sanctuary could be converted to field crop and horticulture crop about 778, 737 and 13 ha, according to the above scenarios, respectively.

The suitable habitat for wild elephant in the year 2011 covered 46,786 ha, which included 1 population patch and 90 general patches, covering 36,218 and 10,568 ha, respectively. The predicted habitats for wild elephant in 2027 as the result of land use changes under scenarios 1 and 2 will decline to 45,717 and 45,690 ha, respectively. Meanwhile, suitable habitat derived from land use scenario 3 cover approximately 46,719 ha, which is similar to year 2011 or would decrease only 22 ha. These results revealed that if forest cover inside the Salakpra Wildlife Sanctuary is properly protected, the extent of suitable wild elephant habitat would not change.

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