

Kessaraporn Ounkerd 2014: Valuation of Carbon Stock in Trees at KhaoWong Community Forest, Chaiyaphum Province. Master of Science (Forest Resource and Environmental Administration), Major Field: Forest Resource and Environmental Administration, Faculty of Forestry. Thesis Advisor: Assistant Professor Pasuta Sunthornhao, Ph.D. 108 pages.

The objectives of the study were to determine the species and density of tree, biomass, carbon stocks and valuation of carbon stock in trees at Khao Wong community forest, Chaiyaphum province. The study was employed stratified random sampling by trees density namely high, moderated and low. Hence, the 1 temporary sample plots of 40x40 m, were laid out in each of the 2 given managerial zone of Khao Wong community forest. namely conserved forest and utilized forest. Therefore, the total number of sample plot were 6 plot. The following data were collected, including tree species, diameter at breast height (DBH) of every trees with their DBH are equal or over than 4.5 cm, and total height of trees. The data to estimate the biomass above ground and below ground, carbon stocks, absorb carbon dioxide and valuation of carbon stocks.

Results of the study indicated that in the zone of conserved forest there were 43 tree species and density of 133 tree/rai with total biomass 84,182.06 tons (dry weight), carbon stock of 39,565.57 tC this absorbs carbon dioxide of 145,086.93 tCO₂ and with the value of carbon stock 153,792,150 Baht. While, in the zone of utilized forest there were 49 tree species and density of 151 tree/rai with total biomass of 74,222.74 tons (dry weight) this converted to carbon stock of 34,884.69 tC, or absorbed carbon dioxide 127,922.15 tCO₂ and the value of carbon stock 135,597,477 Baht. Thus, the total value of carbon stock at Khao Wong community forest will be 289,389,627 Baht. (Based on the interest rate of 6 percent per year and the trading carbon price of 1,000 baht/tCO₂)

Student's signature

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