

Khamphet Phomphoumy 2013: Application of Adaptive Cluster Sampling for Non-timber Forest Products Assessment in Training and Model Forest, Faculty of Forestry, National University of Laos. Master of Science (Forest Resource Management), Major Field: Forest Resource Management, Department of Forest Management. Thesis Advisor: Assistant Professor Weeraphart Khunrattanasiri, Dr.rer.nat. 139 pages.

The aims of this study were to assess the quantity of non-timber forest products namely: rattan, sugar palm (Tao) and Hem by employed adaptive cluster sampling (ACS), simple random sampling (SRS) and line plot system (LPS). The size of sample area was fixed at 1.25 percent of the total area (394 ha). The sampling plot was a circular with measuring size of 0.05 hectare consist 100 sampling plots were used to collect data for LPS. The sampling plot was a rectangular with measuring size 20 x 25 meters consist 100 sampling plots were used to collect data for SRS. The sampling without replacement consist 100 initial sampling plots were used to collect data for ACS. Statistical methods used in the analysis were frequency, percent, mean, variance, sampling errors, coefficient variation.

The result of ACS study, there were 57 network consisting 179 plots in which 224 clumps or 1,085 culms of rattan were found, making up 38.14 percent. The average value was 176.69 culms per ha and its variance value was 1.46. For Tao, there were 152 clumps or 667 culms, which was about 23.44 percent. The average value was 164.69 culms per ha and its variance value was 5.32. For Hem there were 198 clumps or 1,093 culms with the percentage of 38.42. The average value was 214.31 culms per ha and its variance value was 5.57. The result of SRS consisting 100 plots in which 115 clumps or 539 culms of rattan were found, making up 40.31 percent. The average value was 171.13 culms per ha and its variance value was 42.77. For Tao, there were 71 clumps or 331 culms, making up 24.76 percent. The average value was 165.50 per ha and its variance value was 47.18. For Hem, there were 89 clumps or 467 culms, making up 34.93 percent. The average value was 203.06 per ha and its variance value was 41.73. The result of LPS consisting 100 plots in which 103 clumps or 459 culms of rattan were found, making up 34.88 percent. The average value was 133.06 culms per ha and its variance value was 19.52. For Tao, there were 76 clumps or 328 culms, making up 24.92 percent. The average value was 156.19 culms per ha and its variance value was 82.21. The analysis also found 110 clumps or 529 culms of Hem, making up 40.20 percent. The average value was 182.44 culms per ha and its variance value was 21.02.

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Student's signature

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Thesis Advisor's signature