



## Thesis Abstract

### **Participatory Land Allocation In Huai Dau Watershed, Nong Phok District, Roi Et Province, Thailand As A Forestry Extension Management Tool**

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The general objective of this study was to assess before and after change in human behavior of participatory land allocation (PLA). Specifically, the study aimed to: (1) determine the bio-physical, socio-economic, and institutional situations; (2) determine current land use, forest cover and cost of investment; (3) identify major stakeholder (MaST); (4) determine better land allocation to maximize revenue and highest satisfaction; and (5) develop a protocol of PLA as a forestry extension management tool.

The study found nine (9) types of land use classified into 20 sub-types. Most of the area was occupied by natural forest, with nine (9) native tree species identified. The communities in HDW belonged to poor status and encountered loans. The study applied participatory land allocation (PLA) which collaborated with decision makers, comprising eight (8) major stakeholders (MaST) who passed in the stakeholder analysis. PLA and several sensitivity analyses revealed that only para-rubber was the suitable species for planting in 72.75 ha, to maximize revenue of US\$ 294,876. However, the community's highest satisfaction level was doubled when there was an attitude change on PLA implementation. The output of correlation test between  $S_1$  and  $S_2$  separating attitude to knowledge, skill, awareness, preference and adoption which were found to be insignificant with the best correlations was non-linear equations. Meanwhile, it was found that the *PLA process* was the main factor of change in  $S_2$ . Moreover, after PLA implementation, it was found that MaST had an increase change in the aspect of knowledge, skill and awareness more than preference and adoption. The entire research process led to the development of a PLA protocol as a forestry extension management tool serving as a guideline for poverty reduction.