

Apiwat Uaareeleat 2014: An Economic Analysis of Participation in Tree Bank Project, Tung Hong Branch, Chumphon Province. Master of Science (Resource Management), Major Field: Resource Management, Department of Agricultural and Resource Economics. Thesis Advisor: Assistant Professor Penporn Jenekarnkij, Ph.D. 87 pages.

This study examines an economic viability and assesses the opportunity for the sale of forested carbon from Tree Bank Project, Thung Hong Branch, Chumphon Province. Data are collected from interviewing 29 project members out of the total 55 who plant trees in the multiple-crop farms and 6 project members out of the total 10 who plant trees in the single-crop farms. An economic analysis is performed using 5% discount rate for short-rotation trees of 15 years and long-rotation trees of 30 years. The project is supported by Bank of Agriculture and Agricultural Cooperatives, as trees are accepted as collateral against loan with its value is not greater than 50% of wood value in the year of felling.

Members who practice integrated-crop farming plant 92 short-rotation trees and 33 long-rotation trees per household on average. Members who practice single-crop farming plant 25 short-rotation trees and 513 long-rotation trees. Participation in Tree Bank Project is economic viable. The present value of net benefit from planting short-rotation tree is amounted to 3,484.36 Baht/tree with internal rate of return of 31% and benefit-cost ratio of 5.18. Planting long-rotation tree provides the present value of net benefit at 4,262.61 Baht/tree, internal rate of return at 25%, and benefit-cost ratio at 2.35. With time equivalence of 30 year, planting two rotations of short-rotation tree will be more economic viable than of long-rotation tree. With the total 2,488 short-rotation trees and 2,575 long-rotation trees, the total carbon storage becomes 323.35 ton carbon. This amount is not attractive for selling and should be increased by increasing number of trees. The project should sell carbon in voluntary markets as the conditions are quite flexible, providing opportunity for sellers and buyers to negotiate and achieve their purposes.

---

Student's signature

---

Thesis Advisor's signature