

Analyzing the key drivers of tree planting from local people with Bayesian Networks in Cao Phong District, Hoa Binh Province, Vietnam

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ABSTRACT

Known as the climate and watershed protection role, tree planting is an important reforestation activity in forestry sector. In coping with significant deforestation and forest degradation in Cao Phong district, Hoa Binh province, Vietnam, a massive reforestation projects have been implemented such as the 5 Million Hectare Reforestation Program, the Program 747 (472) which provided some money to farmer to plant some forest seedlings, and The Afforestation and Reforestation Clean Development Mechanism (AR-CDM) which were contributed substantially to the forest cover in Hoa Binh province in the last several decades. Even though there have been a lot of attempts and investments in reforestation in the area, an interaction of household characteristics, and socio-economic factors with tree planting decision are still little comprehension. To gain an understanding, 100 households in Cao Phong district, Hoa Binh province, Vietnam were selected by stratified random sampling method and interviewed based on five groups of factors (household characteristic factors, farm characteristics/resource endowments, biophysical factors, socio-economic factors, institutional and policy factors) which were influenced by tree planting decision as well as the area of forest will be planted. By using bivariate analysis, and Bayesian networks (BNs), the research has investigated and determined 4 successful indicators which effect the decision of farm households to plant trees. The results found that the medium households group contribute the highest percentage in tree planting. Besides, the household characteristics and socioeconomic factors have returned effects on the success of reforestation programs. This study provides comprehension in tree planting decision of local people and recommendations for increasing forest in research area.