COMPARATIVE STUDY ON THE SUSTAINABILITY OF INDIGENOUS UPLAND FARMING SYSTEMS FOR WATERSHED MANAGEMENT IN THE CORDILLERA, PHILIPPINES

A Thesis submitted to the faculty of the Department of Food Business and Development, University College Cork, Cork, Ireland
in fulfillment of the requirements for the Degree of
MCOM

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ABSTRACT

This study sought to determine the sustainability of upland farming systems of the indigenous Peoples of the Cordillera Administrative Region, Philippines in relation to watershed management. This sustainability criteria used to quantify upland farming systems were economic productivity, ecological soundness and socio-cultural acceptability.

Result of the study revealed economic productivity of the vegetable upland farming system was dependent on prices of crops produced. Unstable and low prices of agricultural crops tend to affect the economic sustainability of vegetable up[land farming. The indigenous terracing systems adopted were significantly effective in controlling soil erosion and stabilized the upland farms over time. These soil and water conservation measures adopted are sustainable based on the ecological sustainability criterion for judging the worthiness of upland farming systems that can serve its purpose over a period of time. The terracing systems were readily adopted since they were indigenous to the people; hence socio-culturally acceptable to them.

The relationships of farmer's assets to upland vegetable farming system revealed that human and financial assets have no marked effect on the vegetable farming strategies adopted, but the natural, physical and social assets had differed significantly among the farmers in the different communities. Regression analysis showed a significant and strong relationship between the physical assets (farm inputs) and vegetable upland farming system. This indicates a direct effect of the physicals assets (farm inputs) in influencing the decisions of farmers to venture in vegetable farming system as well as its economic sustainability. The high cost of farm inputs and heavy dependence of farmers on chemical fertilizers were factors that affected the economic sustainability of vegetable upland farming system.

The major problem encountered by the upland farmers at Lengaoan and Captain is the lack of irrigation water while the low prices of crops were the priority problem of farmers at Lesseb and Boyacaoan. The cropping strategy of farmers, when faced with crop failure, was to borrow money from their relatives and friends.

Comparative analysis revealed communities with Community Based Forest Management Programme interventions were able to manage their watershed resources better, have more organized community members compared to the communities with no Community Based Forest Management Programme intervention. This means that the upland vegetable farming system of the indigenous peoples of the Cordillera Administrative Region can be compatible with watershed management as long as community members are initially given assistance to be organized and trained on the proper watershed management techniques.