

Community preferences for ecosystem service improvements: Case study in Habarawatta Tank Cascade System (HTCS) in Galnewa DS Division in Anuradapura District

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Abstract

Water tanks are not only made to store water but also to provide a wide variety of services to the humans. The main objective of the study was to examine the community preference for ecosystem service improvements and to evaluate the current knowledge and perceptions of the communities relating to micro land uses on ecosystem services. Four tanks constituted the (HTCS) named Habarawatta, Pahala Habarawatta, Wetakoluwegama, Kanupichchiyagama wewa and were located in two villages ie. Habarawatta and Wetakoluwegama. Both primary and secondary data were collected on the socio economic, ecological and managerial environment of the relevant areas. Data were collected using a structured 30 questionnaires by using simple random sampling technique and analyzed them using descriptive statistics, correlation analysis. Villagers use the tank water for different purposes except drinking. A statistically significant relationship ($p < 0.396$) was not observed between the education level of the households with their knowledge of the ecosystem services of the tanks. There was a lack of knowledge among the communities on the full range of ecosystem services provided by the HTCS and their functions. All the respondents had the view that the tank need to be improved. However they were satisfied about the activities of the farmer Organizations and the officials of the Department of Agrarian Services to some extent. Study revealed that all the respondents were willing to contribute to the improvement and the conservation of the tank ecosystems financially or in terms of labor supply. Respondent are willing to pay monthly fee ranging from Rs.200 to Rs.1000. As a percentage 60% agreed to pay Rs.500 to Rs.1000 and 40% agreed to pay Rs.200 to Rs.500 for the cascade service improvements. It can be concluded that there is a high positive preference among the communities for cascade improvements. It could be recommended that in order to promote the ecosystem or integrated approach in tank management. It is required to enhance the knowledge among the stakeholders and follow an inclusive and integrated approach with the participation of all the stakeholders.

Keywords: *Cascade, Ecosystem services, Management, Public preferences, Tank*

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