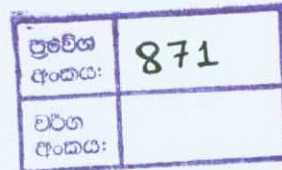


**Environmental and Socio - Economic Changes due to Renovation of
Small Tanks in the Dry Zone of Sri Lanka (A Case study In
Galgamuwa Division of the Kurunagala District)**



by

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Environmental and Socio - Economic Changes due to Renovation of Small Tanks in the Dry Zone of Sri Lanka (Case study In Galgamuwa Division of the Kurunagala District)

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Abstract

Small tank renovation influences environment, economy and social aspects of the tanks and their surroundings. The study was conducted to identify and quantify the effects of small tank renovation programs on environmental and socio-economic aspects. Twelve renovated and 10 non-renovated small tanks and 150 and 86 households respectively were selected random from Galgamuwa DS division. Three questionnaire surveys, twelve Participatory Rural Appraisals (PRA), transect plot analysis and cost-benefit analysis were conducted. Pre and post renovation variations in environment and socio-economic aspects were analyzed using appropriate statistical tools. Fish, reptile, amphibian and mammal populations, in the selected small tanks have not changed significantly due to tank renovation. Some fish species have faced the threat of extinction or reduction in population with renovation. The renovation has changed the aquatic plant cover as it is removed in the renovation process. Birds such as white-breasted water hen, purple swamp hen and Teal species have decreased due to the disturbance of their habitats while Cormorant population has reported a positive change. The groundwater levels in the surrounding areas have increased due to increased water retention capacity and duration. Improved groundwater level and increased water retention in tanks has led to higher cropping intensities which have reduced the dependence on highland crop cultivation. The cost/benefit ratio supports project implementation under both economic and financial terms. The opportunity cost of capital varies between 1.5 to 2.3 in economic norms and 2.4 to 1.7 in financial norms. The sensitivity analysis has proven the robustness of the recommended configuration with regard to the financial viability with a range of possible adverse impact, which could possibly affect both the cost & benefits.

Key words: Tank renovation, eco-systems, environment, Economic benefits, Cost benefit analysis