

2.30 Application of PRA tool to study fish diversity variations due to small tank renovation - A case study from Galgamuwa D.S Division

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ABSTRACT

Small tank renovation has been practiced with the intention of improving agricultural productivity and alleviation of rural poverty in Sri Lanka since the independence. Small tank renovation process influences changes in aquatic habitat that could have impacts on the fauna and flora in the tank systems. Small tank renovation process does not consider the possible changes that could take place on aquatic fauna and flora. This study was conducted to assess the variations that took place in bird diversity in the small tanks due to tank renovation utilizing Participatory Rural Appraisal (PRA) and questionnaire survey. Twelve small tanks from Galgamuwa D.S. Division that were renovated within last 15 years were selected using stratified random sampling technique. Randomly selected 150 farmers responded to the questionnaire survey while 400 farmers were engaged in the 12 PRA surveys conducted to cover the 12 study tanks.

Results from the questionnaire and PRA surveys were used to assess the presence and abundance of fish before and after tank renovation. Tank renovation has changed the living environment of the fish and brought in some changes in the fish population. The population of carnivores has decreased due to tank renovation according to the statistical analysis. This could be due to silt deposition on gills and eggs of those species during the renovation process. The population of the omnivores has increased while fish like barbs has also increased due to reduction of the predators.