

2.29 Bird diversity variation due to small tank renovation in dry zone of Sri Lanka – A case study from Galgamuwa D.S Division

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ABSTRACT

Tank renovation programs implemented in Sri Lanka were intended to increase agricultural productivity but did not take into account the possible impacts on the fauna living in the tank environment. Tank renovation programs in Sri Lanka might have influenced changes in avian fauna inhabited around a tank environment. Therefore, a study was conducted to assess the variations that took place in bird diversity in and around the tanks due to tank renovation. Twelve small tanks from Galgamuwa D.S. Division were selected using stratified random sampling technique. Randomly selected 150 farmers responded to the questionnaire survey while 400 farmers were engaged in the 12 Participatory Rural Appraisal (PRA) surveys conducted to cover the 12 study tanks. Results from questionnaire and PRA surveys were used to assess the presence and abundance of birds before and after the tank renovation.

Questionnaire survey identified that Cormorant species population has increased with the tank renovation. Fifty nine percent of farmers said that Cormorant (*Phalacrocorax niger*) could be seen rarely before the renovation but 85% of them reported that there is an increase of the Cormorant population after the renovation. Removal of tank vegetation has given them a favorable environment to catch their pray. The White-breasted Water hen (*Amaurionis phoenicurus*) and Purple Swamp (*Porphyrio porphyrio*) that used the tank vegetation as the habitat and breeding site are reduced due to tank renovation. This has reduced the environment suitable for egg laying. PRA analysis identified an increase of Lesser Whistling Teal (*Dendrocygna javanica*) in some tanks and a decrease in some other. This study showed that tank renovation could influence the presence of different bird species due to the changes that take place in and around tank environments due to the tank renovation programs.