

## **Abstract:**

Sri Lanka is one of a country with highest inland water bodies and diverse aquatic habitats, which are not utilized. Fresh water bodies comprise of around 260,000 ha. Seasonal tanks comprise 100,000 ha (Perera et al., 2003), undergo serious water deficit in each year. Seasonal tank cascade systems are highly vulnerable to climate change, alarming the livelihoods of people. But still tanks are very valuable natural capital demanding novel innovative management solutions. Being a common property, it demands peripheral villagers and other stakeholder's active participation on the management activities. Objective of this study is to find out viable low cost community based Biodiversity and Ecosystem Services (BES) management package for sustainable utilization of tank ecosystem. An appropriate payment mechanism for Ecosystem Services provided by the wetland ecosystem of the tank is one of an output. In this research, BES dependent livelihoods of the peripheral community and gaps in management systems of seasonal tank ecosystem in Galgamuwa area were identified. Community Based Management (CBM) package was developed. Urban community was found out their willingness to contribute to the CBM package by using appropriate valuation technique. Two main problems are associated with the study area such as, invasive flora species and accumulation of silt. CBM system for these problems mainly for siltation is not properly done. So, participatory dredging activity is defined as CBM package. Because dredging activity called as "*katti kepeema*" is not properly done in past 50 years. Urban people like to contribute for this CBM package. But their willingness to pay for this activity is low (2 rupees by an individual). The reason for such a low value may be due to insufficient understanding and awareness about the importance of seasonal tank ecosystem and siltation issues. As a composite policy tool, Participatory Biodiversity Management tools such as seasonal aquatic food festival including Neglected Underutilized Species (NUS) food species and Seasonal "*Katti kepeema*" festival for Dredging activity can be proposed.

Keywords: Tank ecosystem, Cascade system, sustainable utilization, community based management, valuation of ecosystem.