DIVERSITY OF AQUATIC PLANTS IN THREE SELECTED TANKS AND UTILIZATION OF AQUATIC PLANTS BY THE COMMUNITY IN THE ANURADHAPURA DISTRICT

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'Mihintale', 'Maradankadawala' and 'Thibbatuwewa' tanks were selected as study sites. Not many researches have been done on these tanks in terms of aquatic plants. This study investigates the biodiversity of aquatic plants in above seasonal tanks. A survey was conducted to investigate the utilization pattern of available plants by locals and aimed to instill in the locals the concept of sustainable utilization.

Study was conducted for 6 months. Transects and quadrate sampling was done and abundance of aquatic plants was measured by using a modified Braun-Blanquet method. Representative specimens were collected for subsequent verification of field identification by comparing with the reference collection at the Rajarata University of Sri Lanka and at the National Herbarium, Peradeniya. Data were analyzed, using Diversity indexes. Information on utilization of aquatic plants were gathered by interviewing 500 people in Anuradhapura District by using a structured questionnaire.

Thirty four aquatic plant species, which belongs to 30 genera and 24 families, were encountered. When considering the cover values: 'Mihintale' and Maradankadawala' has a higher percentage of *Marsilea quadrifolia* (8.37% and 9.11% respectively) and in 'Thibbatuwewa' it was *Ceratophyllum demersum* (11.99%). Species richness is highest in 'Mihintale' tank (4.2180) and lowest in 'Tibbatuwewa' tank (3.1331).

Among the 500 respondents: 30 % used aquatic plants for food, 27% used flowers for offering and decorations, 15% in aquarium and ponds, 14% for medicinal purpose, 09% as bio-fertilizers and 05% for weaving and thatching . Mostly consumed edible aquatic plants are, *Alternanthera sessilis* (31%), *Ipomoea aquatica* (27%) and *Nelumbo nucifera* (19%). *Baccopa moneri*, *Aponogeton* spp., *Nelumbo nucifera*, *Hygrophila shulli* and *Nymphea spp.* ('Nil Manel') have been recorded as medicinally important plants for the community.

From the questioner survey it is evident that people have some knowledge about aquatic plants, their derivatives and also they are willing reward to get rid of certain aquatic plants. The results of this study indicates that there is a high potential to develop industries related to aquatic plants in Anuradhapura and by it promote sustainable utilization, so that they will maintain these tanks in good condition while benefiting but not over exploiting the rich resource of available aquatic plants.