Assessment of Riparian Vegetation of *Weoya* and *Halgolla* Estates in *Weoya* Catchment for its Conservation

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Riparian ecosystems which are lying on the riverbanks are highly diverse in nature and also referred eco-tones since they are located in between terrestrial and aquatic ecosystems. Sri Lanka, an island of Indian Ocean comprises 103 natural rivers; therefore studying about riparian ecosystems of the country is significant in ecological purposes. This study was conducted to assess the riparian vegetation of the *Weoya*, a left bank tributary of *Kelani* River, Sri Lanka, under four land use categories, namely Rubber Buffer Zone (RBZ), Encroached Riverbank Reservation (ERR), Homegarden based Riparian (HGR) and Natural Riparian (NRF). Plots of 5 m ×20 m established perpendicular to the riverbanks from shallow water depth were again divided into two-transverse adjoined plots. Vegetation diversity of each land use was calculated for three strata; canopy, understory and ground cover, using Shannon-Weiner Diversity Index (SWI). From experimental plots, 182 floral species were recorded and categorized under trees, vines, shrubs, herbs, grasses and ferns. Nested factor factorial model and ANOVA procedure were used to analyze data at $P<0.05$ significance. Results show that canopy SWI is significantly higher in RBZ and NRF than ERR and HGR showing human influences to reduce tree diversity. Understory SWI is significantly low in upper plots than lower plots while ground cover shows no significant difference in SWI. Due to presence in all land use categories and also due to the suitability, *Areca catechu, Caryota urens, Artocarpus heterophyllus, Madhuca neriifolia, Hydnocarpus venenatus, Horsfieldia iryaghedhi, Bambusa vulgaris* and *Barringtonia racemosa* were identified as suitable tree species to plant on the riverbanks of *Weoya* catchment.

Keywords: *Kelani* River Basin, Riparian vegetation, Sri Lanka, Vegetation assessment, *Weoya*

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