Hypertrophic-eutrophic alteration in Kandy Lake, following an outbreak of a *Microcystis* bloom

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Abstract

Urban water bodies especially those located in the humid tropics are vulnerable to high anthropogenic pressures although their uses are tied up with hygienic and economic conditions of the riparian communities. An aesthetic water body located in the hill capital (Kandy) in Sri Lanka was subjected to long term monitoring of chlorophyll-a and Secchi depth and other environmental variables following an outbreak of *Microcystic aeruginosa* bloom in May 1999. The episode of hypertrophic-eutrophic alteration of in Kandy Lake is discussed here in relation to monsoon-bound rainfall events and other environmental variables.

Management of urban water bodies in developing countries is neglected to a greater extent primarily due to poor awareness and financial constraints. They receive a variety of untreated effluents, particularly human and domestic wastes and galloping eutrophication leading to a hypertrophic condition is inevitable (Silva and Schiemer 2001; Silva 2003). Despite a growing pool of knowledge on water resource management in global scale, this unique problem has received very little attention and site-specific processes responsible are hardly understood. Urban water bodies loose much of their beauty and attractiveness for recreational value and gradually become nuisance ones in many instancesShallow man-made water bodies in Sri Lanka experiencing two moisture carrying monsoons exhibit a distinct annual trophic shift from mesotrophic to eutrophic as a result of rainfall-bound filling and water release to meet the irrigation demand (Schiemer et al. 2001). However, the processes determining the ecological response due to rainfall patterns and other environmental variables in urban water bodies are different from those in irrigation and hydropower reservoirs and are not