

P-1

Investigation of Illegal Encroachment and Landfilling in Bolgoda Environment Protection Area

Kumudini N.M.U.¹ and Athapattu B.C.L.^{2*}

¹Central Environmental Authority, Battaramulla, Sri Lanka

²Department of Civil Engineering, Faculty of Engineering Technology, The Open University of Sri Lanka, Nawala, Sri Lanka

*bandunee@yahoo.com

Abstract

The Bolgoda water body is the only natural lake in the Sri Lanka situated in the western province, spreading over six divisional secretaries divisions of Rathmalana, Kesbawa, Moratuwa, Panadura, Bandaragama and Kalutara. However, it is a basin estuary brackish water body and also categorized as a semi-closed lagoon. This sort of wetland plays a vital role on preventing of floods by retaining of excess water in wet season and support a number of endemic fauna and flora. Presently Bolgoda ecosystem is faced to many threats and to overcome those threats it was declared as Bolgoda is an Environmental Protection Area (EPA). However, there is no any management plan for the conservation. Therefore, this study is focused to identify and estimate damage on Bolgoda Environmental Protection Area and also to propose a conservation and management plan.

In order to identify existing threats, field survey was conducted covering 127 locations in Bolgoda EPA and with help of records available in Central Environmental Authority and Divisional Secretariats. Further, survey plans obtained from the Department of Survey were analysed to identify encroached area to the water body. However, illegal land filling, encroachments, spreading of invasive species, mangrove destructions and waste dumping sites were also identified. Before preparing a conservation and management plan to address above threats developed a zoning map was developed according to the identified damage levels.

This study reveals that Bolgoda EPA is seriously threatened by encroachments, illegal land filling and unauthorized constructions, discharge of industrial effluents, dumping of solid waste including saw dust, mangrove destruction, and spreading of invasive species due to wastewater discharge. The results also showed that approximate illegal land filling and encroachment in Bolgoda reservation were 0.0756 km² and 0.0077 km² respectively. The damage is severe in Moratuwa, Kesbawa, Rathmalane, and Panadura District secretariats (DSs) than Bandaragama and Kalutara DSs. However spreading of *Allocacia spp* were observed in all visited sites.

Keywords: Environmental protection area, Bolgoda ecosystem, Illegal landfilling, Encroachment, Conservation plan