

Perera, D.H.A.S.S. & V. Vasanthakumary
Department of Geography, University of Peradeniya

Poster

Biyagama South: Case study of the right bank of the Kelani River

Riparian buffers play an important role in balancing fluvial action and maintaining the equilibrium of the whole ecosystem beside the river banks. That is made up of trees, shrubs and grasses and those areas protect and enhance the aquatic environment and shading the water keeps it cooler, an essential condition for many desirable aquatic species. Increasing of anthropogenic activities adversely affects the riparian buffers. The Kelani River bank is one of the major buffer zones affected in Sri Lanka, and faces lots of environmental and social problems at present.

The study area, Biyagama, is located in the Western Province at Gampaha District that margins Colombo District in Sri Lanka. The objectives of this study are to identify the distribution of flora and fauna, changes in landscape ecology, causes and consequences of landscape ecological changes. South bank of the Kelani River was used as a sample; and that included 2 km from Bandarawatthaha to Raggahawaththa. Data collection consists of both primary and secondary data. Primary data were collected using observation and focus group discussions. The study found that landscape ecology of the study area has changed in several ways. About 30% of land was eroded as a result of unmanaged industrial development practices and sand mining activities, from 1981 to 2010. That directly affects the landscape ecology of the area and local community. Sensitive species like fishes and reptiles are gradually disappearing in the area; such as iguanas and tortoises and also they are losing their habitat in the aquatic environment. In the SE monsoon and first Inter monsoon period the impacts were high due to flooding.

Reversely ecological changes affect the human activities such as bathing and domestic water supplies in the study area. Seven bathing places are not functioning out of 13 in the study area. Therefore, the study suggests that there is an imperative need for better planning to protect environmental sustainability of ecological landscape in the right bank of the Kelani River.

Keywords: Riparian Buffers, Ecological Landscape and Environmental Sustainability