Biotechnologies towards Sustainable Development in Malaysia

Zarina Zainuddin

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Molecular approach of macroinvertebrates in tropical wetland, Lake Bera, Malaysia: Towards the assessment of ecosystem health

Nurhidayati Abdul Aziz, *Ahmed Jalal Khan Chowdhury, Kamarul Rahim Kamarudin, Mohd Azmi Ambak and Najiah Musa

*Corresponding author: jkchowdhury@ium.edu.my

Introduction

Wetland conservation and management issues in Malaysia

One of the key assets of Malaysia’s biodiversity is its rich and diverse aquatic ecosystems including rivers, lakes, reservoirs, swamps, mangroves, estuaries, and seas. According to Yusoff et al. (2006), although 90% of the Malaysia’s water is found in sea, the inland water ecosystem supports most of the terrestrial population lives. Wetland plays a significant role in agriculture and fisheries industries, apart from providing a wide range of products used by local people such as food, medicine, timber, fuel wood and clean water (Gawler, 2002; Murugadas, 2002). In addition, wetlands also fulfil the need for continuous water supply throughout the year through replenishment of groundwater supplies, maintenance of water tables for agriculture, flood control, climate change mitigation, sediment and nutrient retention and water purification. The high porosity of peat swamps for instance, enables a large volume of water to be retained during heavy rainfalls and gradually released during dry season (Yusoff et al., 2006; Murugadas, 2002).