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*Title* : *Dynamics of Landuse Pattern and Impacts on Multifunctionalities of Pallikaranai Wetland Due to Solid Waste Disposal*

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Urbanization has been the driving force in many changes such as flooding, pollution and deterioration of the environment. The major cause being the anthropogenic activities. Wetlands provide a habitat for a wide variety of plant species, invertebrates, fish and large animals including rare, threatened and endangered species. The plants and animals in wetlands include those that live on dry land or in water and those that live only in a wet environment. The ecological value of wetlands arise from their high primary productivity and rich biodiversity.

The Pallikaranai Marsh has been deteriorated to a great extent due to encroachment, solid waste dumping and other activities. The areal extent of the marsh has been reduced from 5000ha to 550ha. The marsh has been a home for many migratory birds and had many functions such as aquifer recharge and also fishing as a livelihood for many people.

The satellite images of 2001 and 2008 were used to find the change in land use pattern with respect to area. GIS tool was used to identify the extent of the area that has been lost due to anthropogenic activities. Indices such as Dominance Index, Diversity Index and Evenness Index were used to study about the wetland. Water Quality of the wetland was tested for basic parameters and Wetland Water Quality Index was derived and the degradation status of the Wetland was found. Questionnaire survey was conducted to know about the activities taking place in the Wetland and also, the problems people face due to dumping and fragmentation of wetland. Based on the results and literature, the short term and long term environmental concerns was framed to stop further degradation of the wetland.