

LOSS OF KOTTE MARSHLAND: CAUSES AND ITS IMPACT ON ENVIRONMENT

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The Colombo Metropolitan Region is enriched with wetlands and has been accredited as RAMSAR wetland site. Wetlands in the Colombo Metropolitan Region can be subdivided into several segments, of which Kotte marsh is one of the significant segments. The land use pattern of Kotte has changed over time. This study was carried out to determine the change in the extent of the Kotte marshland and its impact on the environment from 2004 to 2021. Direct observation and field discussion with the public were used to obtain primary data on the status of the Kotte marshland and verification of the boundary. Satellite images from Google Earth Pro and Open Street mapping were used to assess the extent of the Kotte marshland. The assessment has been done by georeferencing and digitizing satellite images of Kotte marsh using GIS tools (Arc Map 10.4). As per the analysis, the extent of the marsh in 2004 was 57.21 ha, and in 2021 it was 45.07 ha. It was reduced by 12.14 ha within 17 years. These wetlands have been rapidly deteriorated. The health of the wetland is gradually declining from time to time as a result of incorrect extraction of uses and misconceptions forwarded to wetlands. Urbanization is a significant cause of this wetland loss in Sri Jayewardenapura Kotte. Filling of the marsh for industrial purposes, reclamation, water pollution, garbage disposal in the surroundings of the marsh, and water regulation are affecting the quality of the wetland. Marshland reduction increases the probability of flood hazards in Sri Jayewardenapura Kotte. The Kotte marshland loses its ability to control floods because it lost reed beds through the filling process. The marsh was a habitat for *Prionailurus viverrinus* (fishing cat); however, the animal in the marshland habitat is now diminished. It is currently the area's most important metropolitan wetland. It delivers a variety of ecosystem services on a local, city, and regional scale. Hence, it is essential to make the public aware of the importance of wetlands and the proper implementation of wetland management strategy plans for urban development to protect the wetlands.

Keywords: Colombo Metropolitan Region, Ecosystem, Kotte marshland, Wetlands