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Pre- and Post-Urban Wetland Area in Dhaka City,Bangladesh: A Remote Sensing and GIS Analysis

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ABSTRACT

Landscape of Dhaka city - one of the fastest growing mega cities in the world, is undergoing continuous changes and modifications due to progressive urbanization. Pre- and post-urban changes of water bodies in the city were studied using aerial photographs and SPOT images in GIS environment. In 1968, the total area of marshy and peaty inundated low-lying areas was 133 km2, which was depicted to be 67 km2 in the year 2001. The total area of inland lakes as estimated from the aerial photos of 1968 was 5.1 km2 which became 1.8 km2 in the year 2001 as seen in SPOT image. More than 50% of the wetland area reduced over the period 1968 to 2001. Changes of the water body mostly occurred in the regions where majority of the urban expan-sion took place. The urban infrastructures filled and/or compartmentalized the water bodies, causing water loggings problem during wet-season in various part of the city. Development and alteration of the existing water bodies should consider the natural hydrological conditions so that the changes can cope with the artifi-cial intervention.

KEYWORDS

Wetland, Dhaka City, Bangladesh, Remote Sensing, GIS

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