Inventory and change detection of wetlands in Barak Valley, Northeast India: A remote sensing and GIS approach

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Abstract: Barak Valley comprising the three districts of South Assam, viz, Cachar, Hailakandi and Karimganj, is endowed with numerous wetlands dotting the alluvial plain. From the viewpoint of their origin they can be divided into Riverine and Palustarine, where the former group is directly related to the cut-off processes of the rivers and the later group is formed as a result of water logging. Study of six temporal data sets reveals that the palustarine wetlands show large variation in the water-spread area with time while riverine wetlands show lower rate of change for the same duration. The variation in water-spread area of the palustarine wetlands is because of their shallow nature, high rate of sediment generation and dispersal from the adjoining hills as well as agricultural activities along the fringe areas. The overall water-spread area and density show a declining trend without much shifting in their position and thus show shrinkage in the wetland inventory of the region.

Keywords: Wetland, Barak valley, change detection, riverine, palustarine