

LAND USE/LAND COVER CHANGES IN DIGHOLI BEEL OF KAMRUP DISTRICT, ASSAM

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Abstract

Like other wetlands of Assam, the wetlands of Kamrup district also experience considerable shrinkages in their area. It is disheartening to note that the sizes of all the wetlands of the district have been decreasing over time, mainly because of the influence of many irrational anthropogenic activities. The wetlands of Kamrup district have been facing serious threat mainly from the ruthless anthropogenic activities. The irrational human interventions on the wetlands not only bring changes in their physical characteristics but also the functioning of the aquatic ecosystems. Wetlands play a significant role for regulating climate, providing water for people and cattle, supporting habitat for various aquatic plants and animals and also for providing livelihood to the people living around it. The Digholi beel is one of the important beels of Kamrup district which has its natural linkages with the river Brahmaputra. The present study is carried out in the Digholi beel of Kamrup district, Assam and is basically based on the satellite images collected from the Landsat images and IRS images

Key words: Beel, fluvio-geomorphic characteristics, aquatic bio-diversity, livelihoods, changes.

Introduction

Wetlands are the most important habitats of a large variety of plants and animals which contribute a range of goods and services to the concerned human society (Maltby, 1991; Aber, *et al.*, 2012). Being located in transition between terrestrial and aquatic ecosystems the wetlands are biologically the most productive ecosystems of the landscapes (Maltby, 2009, Keddy, 2010). However, very recently under the influence of many socio-economic and political factors the valley's wetlands have been facing a lot of problems. The increasing pressure on the wetland ecosystems caused by overpopulation, extension of agricultural lands to the marginal areas, rapid growth of human settlements, urbanization, industrialization, unscientific application of chemical pesticides and fertilizers on the agricultural fields, disposal of garbage and wastes have triggered serious threats to the aquatic biodiversity in the wetlands of the Brahmaputra valley. In Kamrup district of Assam the rate of degradation of wetlands is more as the processes of urbanization, industrialization and expansion of human settlement have been going on very rapidly in the district (Bhattacharya and Bhagabati, 2011). All most all the wetlands of the district are under threat and many of them have been disappearing (Sahariah and Bora, 2008). The degradation of wetlands in the district has not only caused many environmental crisis but also created many social and economic problems to the neighbouring communities. The Digholi beel of Kamrup district (Fig.1) is one of the important wetlands of the district which has very recently faced big challenges from the ruthless and irrational human activities in the name of so-called development.

Study Area

Digholi beel is located between $91^{\circ}39'10''$ E and $91^{\circ}39'50''$ E longitude and $26^{\circ}12'42''$ N and $26^{\circ}14'20''$ North latitude. It is at an altitude of 168 feet above the mean sea level. This beel is located under Sualkuchi Development Block of Kamrup district. The beel is adjacent to the mighty river Brahmaputra and on the foothill region of Agyathuri hill. The total area covered by this wetland is 110 ha. The beel surrounded by north Malang hill and Sindurighopa village on its north, Pacharia Dalor Pathar and Pub Dadara on its west, Kalipahar and Sila Reserved forest on the east while the southern part is bordered by Dali Bari No. 1 and Agyathuri village.