**Land Use and Land Cover Dynamics in Abaya-Chamo Lakes Basin, South Ethiopia**

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Abaya-Chamo Lakes Basin (ACB) is home to one of the most remarkable aquatic and terrestrial ecosystem in the rift valley region of Ethiopia. The basin has experienced a rapid, increasingly pronounced land use and land cover changes (LULCC) since recent years. Very few studies have been conducted so far to examine the LULCC of the basin; those that have been done are primarily at river catchment level. None of the past research has sought to capture the information at the basin level. In this study, a combination of remote sensing data, field observations and information from local people were used to examine the LULCC of ACB from 1985 to 2010 and identify the driving forces behind the change. The result of LULCC analysis indicated a reduction of shrubland (28.82%), heterogeneous agricultural areas (14.17%) and bare land (33.13%) between 1985 and 2010. The built-up area increased more than threefold, while arable land and inland wetlands increased by 59.15% and 25.52% over the same period, respectively. Inland waters, forest and coffee agroforestry showed no change. A detailed GIS analysis on individual lakes found in the basin revealed that Lake Chamo reduced by 9.3%, whereas Lake Abya increased by 1.7% between 1985 and 2010, respectively. The rapid expansion of arable land was observed at the expense of shrubland and bare land, particularly in the warm semi-arid lowlands (Kolla) area of the basin. Rapid population growth and frequent change in government policies were identified as the two key driving forces of the LULCC in the basin. Infrastructure expansion in the form of roads, rural electrification, health services and modern irrigation facilities were some of the driving forces additionally mentioned as responsible factors for the changes. Recurrent drought and soil erosion were among the perceived prominent consequences of the LULCC in the study area. The driving forces and related changes in LULC in ACB may lead to sever damage to the aquatic and terrestrial ecosystems of the basin if no assisted restoration is made in the future.

**Keywords**: Land use and Land cover change, Abaya-Chamo Lake basin

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