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Land Use and Land Cover Change (LULC) in the Lake Malawi Drainage Basin, 1982-2005

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ABSTRACT

Changes in land use and land cover (LULC) in the drainage basin of Lake Malawi over the period 1982-2005 were estimated from satellite imagery, and possible relationships were evaluated among the four major land-cover classes: cropland, forest, water, and savanna/shrub/woodland. AVHRR and MODIS sensors gave different values of areal extent of the four classes, limiting the feasibility of establishing consistent temporal trends over the entire period of the study, but forest land showed the least change among three land cover types, and extent of water bodies remained virtually unaltered over the period. AVHRR results show that cropland was mainly derived from savanna/shrub/woodland, which declined by almost 90% over the period 1982-1995.

KEYWORDS

AVHRR, Lake Malawi, Lake Surface Temperature, MODIS, Reflectance

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