

ABSTRACT

In East Africa, wetlands are steadily converted to agriculture for food security reasons. This study analyzed high spatial resolution panchromatic and color photographs in the Anyiko wetland in Kenya to reveal wetland conversions between 1966 and 2018. In addition, socio-economic determinants of land use/cover change are assessed in the Anyiko wetland. Socio-economic data was collected through a questionnaire survey of 226 households. A Chi-squared Automatic Interaction Detector (CHAID) decision tree approach is utilized to assess determinants of wetlands conversion. The results showed that between 1966 and 2018, the wetland area reduced by 55%, mostly attributed to agricultural development. Households were more likely to cultivate the wetland if they did not harvest papyrus for artisanal products, were male-headed and lacked alternative sources of income. The perceptions that wetland is “wasteland” and conversion to agriculture provides higher net monetary benefit did not influence wetland cultivation. Hence, the conversion of the wetland was determined by the socio-economic status of the households rather than perceptions on its value.