MONITORING THE CARBON STORAGE OF URBAN GREEN SPACE BY COUPLING RS AND GIS UNDER THE BACKGROUND OF CARBON PEAK AND CARBON NEUTRALIZATION OF CHINA

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ABSTRACT

Based on the background of Carbon Peak and Carbon Neutralization (CPCN), this study aims to applies Remote Sensing (RS) images of Shenzhen in 2008, 2013 and 2018, combined with RS and Geography Information System (GIS) technology to classify Land Use/Land Cover (LULC), calculate Net Primary Productivity (NPP), and then estimate the carbon storage of green space in Shenzhen. The results show that during the decade from 2008 to 2018, the green space in Shenzhen is reduced and the construction land has increased. In the process of land transfer in Shenzhen, both cultivated land is non-agricultural and the reclamation of construction land is withdrawn, green space carbon reserves decreased in the beginning and then increased. The reason is that green space was transformed into other types of land from 2008 to 2013, resulting in the reduction of green space carbon storage. However, the change of green space from 2013 to 2018 is not obvious. Due to Shenzhen advocates a low-carbon economy and green development, resulting in an increase in carbon storage.

KEYWORDS: Net Primary Productivity (NPP); Land Use/Land Cover (LULC); Remote Sensing (RS); Carbon Storage; Climate Change