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PEATLANDS' RESTORATION MONITORING THROUGH A CUBESAT MISSION

Abstract

Peatlands -waterlogged layers of decaying plant material -play a key role in the Earth's carbon cycle regulation as the vegetation absorbs carbon dioxide through photosynthesis. In the past they have been excessively destroyed as they were considered of minor significance. Recently there are numerous collaborations and efforts for their restoration. Peatlands may be found in the UK and especially in Scotland, where the 20The research aim of the 3UCubesat mission of Glasgow University Orbit Team is after identifying with satellite imagery the restored peatlands and find the correlation between the peatland area coverage -via our satellite's data collection and the carbon dioxide levels – via Sentinel 2 data. The Area of Interest is Scotland, the dependent variable is Carbon Dioxide levels, data collected from Sentinel – 2, and the independent variable is NDVI (Normalized Difference Vegetation Index) which will indicate the extent to which the carbon dioxide levels in the atmosphere have been minimized.