

MONITORING OF TERRESTRIAL CARBON CYCLE IN MONGOLIA USING MULTIPLE REMOTE SENSING DATASETS

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The terrestrial biosphere plays an important role in the global carbon cycle linked with climate change, the main cause of global warming. Mongolian ecosystems are particularly vulnerable due to the relatively high altitude of the country and the continental semi-arid climate. Therefore, it is important to monitor environmental changes. So far, many studies have analyzed terrestrial vegetation changes in Mongolia using a single satellite-based vegetation index, dataset, such as MODIS and GIMMS datasets. However, synthesis analysis using ground observation, remote sensing, and ecosystem modelling is missing.

The purpose of this study is to show robust vegetation and terrestrial carbon cycle changes using multiple available datasets of climate, vegetation, and carbon cycles, covering ground observation, remote sensing datasets, and model outputs. This study covers the periods from 1980s to 2020. The result will allow our scientists to plan by making more educated decisions in degradation area, by joint discussion among policy makers and scientists.

Keywords: climate change, terrestrial carbon cycle, remote sensing