

SLM Intervention Impact Assessment Using Remotely Sensed Data

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Abstract

The purpose of this paper is to examine the benefits of watershed conservation and management practices introduced in the Abbay River-Basin of the Amhara and Benishangul Gumuz Regions in Ethiopia from 2009-15 as part of the Tana Beles Integrated Water Resources Development Project (TBIWRD). Specifically, this paper examines the impact of project interventions on vegetative intensity as measured by the Normalized Difference Vegetation Index (NDVI). The Google Earth Engine developer platform is used to compute seasonal average NDVI values at the pixel level (30m resolution) in project areas as well as proximate, non-intervention(control) areas. A panel dataset is constructed combining pixel-level NDVI with micro-watershed-level M+E activity data. Controlling for pixel characteristics by way of a fixed-effects regression model, we find TBIWRD has had a positive impact on vegetation outcomes as measured by NDVI. These results are found to be robust to various specifications.

