Monitoring forest degradation for a case study in Cambodia - comparison of LANDSAT 8 and SENTINEL-2 imagery -

Abstract:
We use a Normalized Burned Ratio (NBR) differential approach for detecting forest canopy disturbance caused by selective logging in evergreen tropical moist forests of central Cambodia. The general disturbance pattern obtained from Landsat 8 (30 m) imagery is largely compatible to Sentinel-2 (10 m), showing good conformity to high resolution RapidEye reference data. However, the 10 m spatial resolution of Sentinel-2 provides notably higher spatial detail and purer pixel values, increasing the potential for detecting fine and subtle forest canopy changes as indicators for potential forest degradation. We can expect further improvement for detecting short-lived disturbance signals in tropical forest canopies due to an increased revisit frequency (5 days) after the Sentinel-2B launch.


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