How to face fragmentation and heterogeneity by remote sensing? Essential Biodiversity Variables revisited

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Abstract

Finding ecological proxies of species diversity is important for developing effective conservation plans of natural areas at various spatial scales. Remote sensing represents one of the most powerful approaches for measuring ecological heterogeneity at a number of spatial and temporal scales. So far, some progress has been made to promote remote sensing based measures of ecological variability as a direct proxy of biodiversity. On the one hand, they are powerful since they can explicitly detect the variability of ecosystem properties over space and time, while some pitfalls related to spatial and spectral resolutions and to measurement approaches should be faced. In this study, we will summarize the power of heterogeneity-based variables to estimate biodiversity under the Essential Biodiversity Variables' umbrella to strengthen the knowledge of ecological changes over space and time by remote sensing. We will extend on the proposal of a new RS EBV candidate based on spatio-temporal scale analysis in order to improve global standardized biodiversity measures.