

Forest cover and disturbance changes and their driving forces: a case study of Western Ore Mts., Czechia, heavily affected by anthropogenic acidic pollution in the second half of the 20th century

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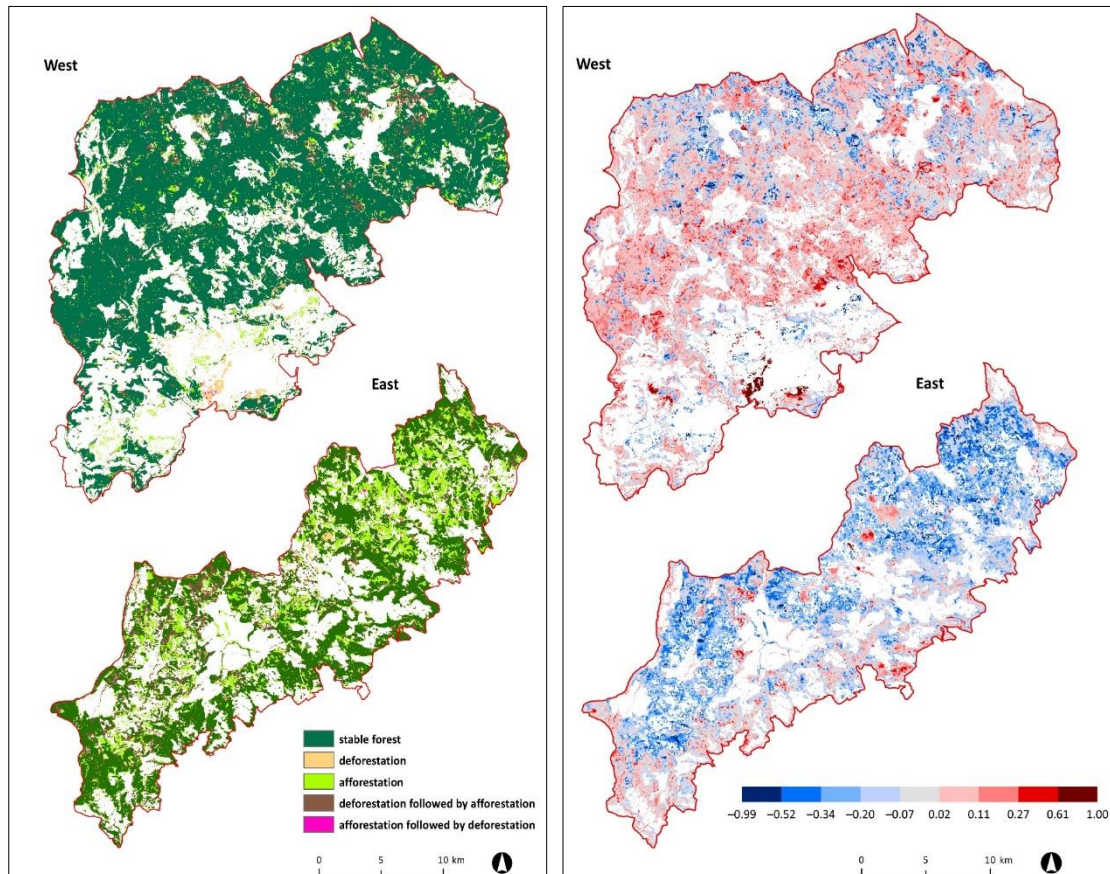
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The study focuses on forest damage and recovery and their driving forces in the Western Ore Mts. from the 1980's

Goal: to evaluate forest cover and disturbance dynamics in connection with acidic pollution and its subsequent reduction using Landsat data

Data: Landsat 4, 5, 7 and 8 surface reflectance T1 products

Methods: An integrated forest Z-score - Huang et al. (2010), Disturbance index (DI) - Healey et al. (2005)



Great difference between West and East **1985 – 2016**
(gradient of pollution)

Stable forest area between 1985 and 2016 is significantly higher in the West (by 22.4 percentage points).

Afforestation is a trend that dominates in the East (higher by 16.4 percentage points in comparison with West)

In the East T_{DI} values mostly document recovery processes in the stable forested areas

The most effective factors of the forest recovery: air pollution control legislation, high investments to both desulphurization and extensive forest reconstruction, more sustainable tree species composition in the region.

Forest recovery continued till about 2004, however, our results showed further fluctuations in forest cover and DI during the last decade.

Further investments in forest state improvement desirable