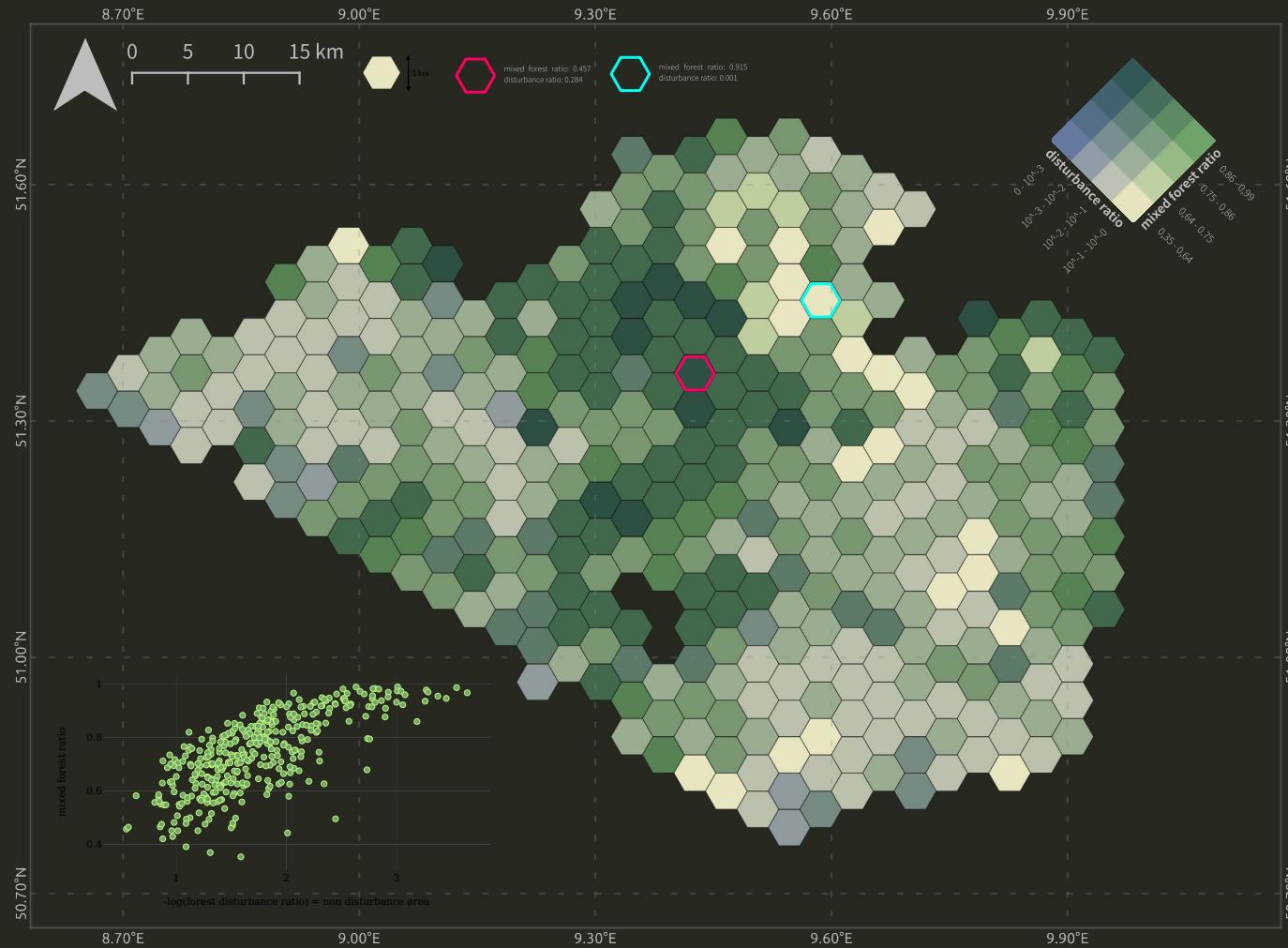




Are mixed forests with native trees more resilient?

The condition of German forests has deteriorated to record levels due to fire, storms, drought, and a bark beetle infestation intensified by climate change. Experts predict that these forest disturbances will increase and accelerate in the coming years and decades [1]. Recent studies indicate that mixed forests, including native trees, increase resilience to disturbances compared to monospecific ones and maintain ecosystem functioning under predicted environmental change [2]. This map displays the resilience of mixed forests to forest disturbances in 2020 in a part of North Hesse.



Each hexbin includes broadleaved and coniferous forests classified by Copernicus land monitoring and forest disturbances classified by using Normalised Difference Vegetation Index (NDVI) derived from Sentinel 2A multi-temporal image from May to October 2020. The broadleaved forest ratio is calculated as a mixed forest indicator. The disturbance ratio is calculated by dividing disturbance areas [m^2] by forest areas [m^2]. The below scatterplot shows the positive relationship between mixed forest and non-disturbance forest areas.

