

The UFZ Forest Condition Monitor is a project funded by the Helmholtz Association within the [Land Cover & Dynamics Working Group](#) of the [Remote Sensing Department](#) at the [Helmholtz Centre for Environmental Research - UFZ](#) in Leipzig. The UFZ Forest Condition Monitor provides (remote sensing-based) comprehensive annual/seasonal derivations of forest condition continuously since 2017. This is valuable complementary information compared to common sample-based surveys, such as the [Forest Condition Report](#). This report is based on precise and comprehensive forestry data acquisitions, but is therefore very time- and personnel-intensive and limited in the number of survey points. By utilising both components - Monitor + Report - a more robust regional perspective can be depicted for the first time, and a spatial translation of the statistically collected forestry data can be achieved. This makes the drastic climate change-induced dynamic changes in forests easily accessible even for non-experts.

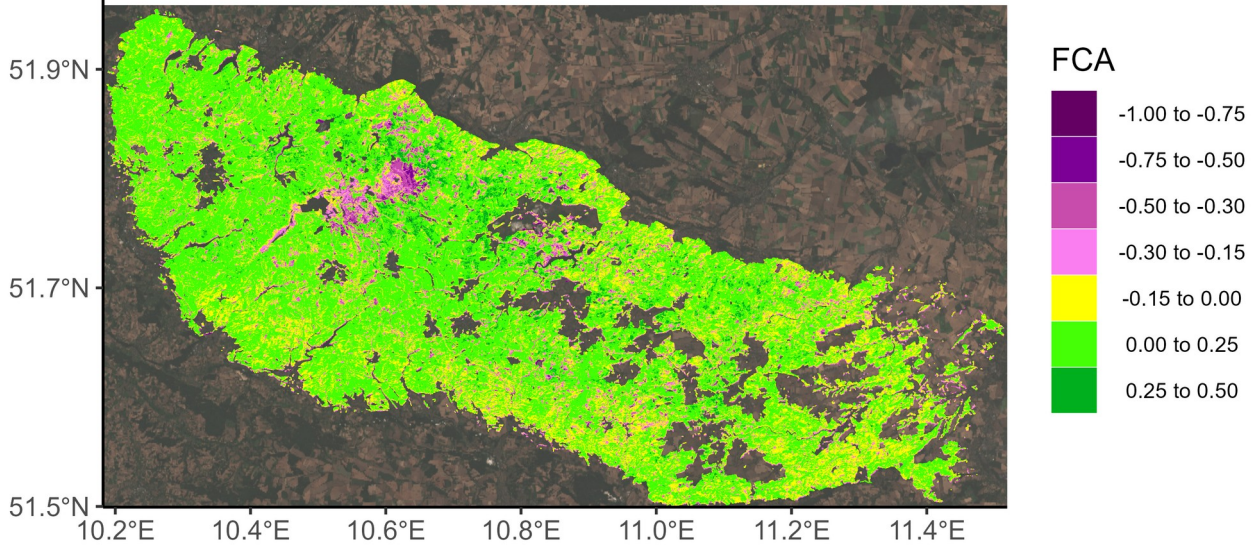
In this project, current satellite data are compared with long-term observations to analyse changes in the forest and to identify anomalies. Subsequently, these anomalies are validated through forestry surveys and damage mappings at selected observation sites. The UFZ Forest Condition Monitor thus provides information for all forested areas in Germany. The maps from 2017 to 2022, especially for areas in central Germany such as the Harz, Sauerland, and Saxon Switzerland regions, show a significant increase in damaged forest areas, particularly from 2019 onwards. There are diverse causes for this phenomenon: heat, drought, pest infestations, and their interactions damage the forests, leading to subsequent effects such as windthrow and increased risk of forest fires. The scientific analysis using satellite data depicts the dynamics of forest condition induced by climate change in a spatial manner. In addition to forest condition, the project also derives other products such as dominant tree species, vegetation length (phenology), and the future distribution of tree species under the influence of climate change.

The UFZ Forest Condition Monitor does not replace the forestry surveys for the Forest Condition Report conducted on behalf of the [Federal Ministry of Food and Agriculture \(BMEL\)](#), but rather serves as a complementary addition.

## Growth Region Harz

2017

20 km 

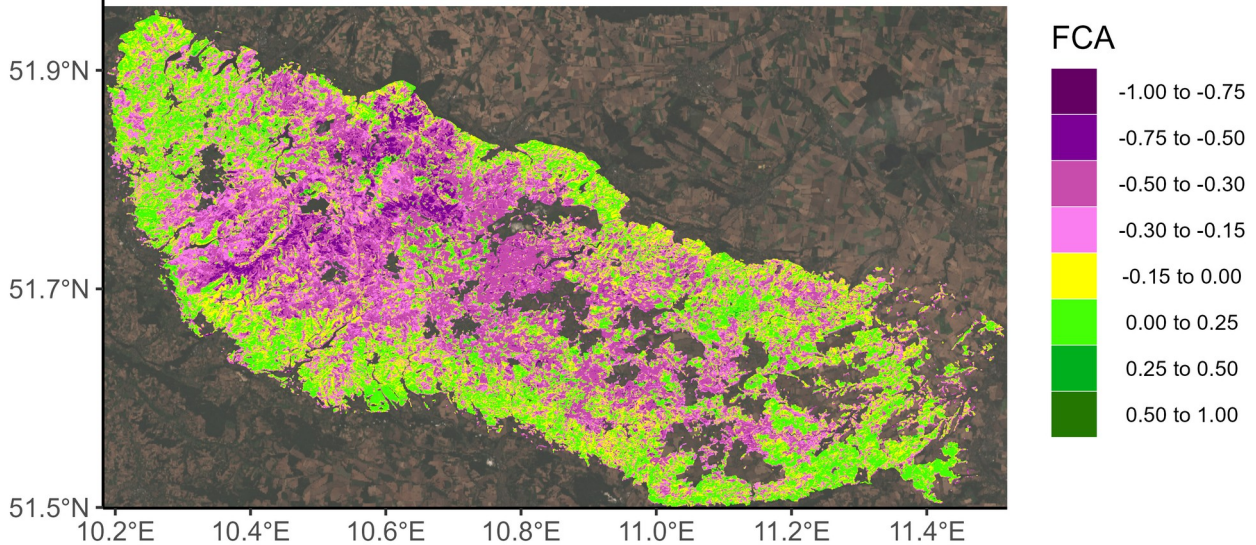


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## Growth Region Harz

2022

20 km 



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