

## **Next forest generation – predicting current forest regeneration**

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**Abstract:** Existing forest regeneration provides the basis for future forests and is of increasing scientific interest, particularly due to global change, associated disturbances, and the need for forest conversion. Nevertheless, there is a lack of maps characterizing the currently available forest regeneration in terms of density and tree species composition. Here, we assess the potential to map current species distributions in the regeneration using data of small trees from the national forest inventory of Germany. We calibrate and evaluate species-specific regeneration distribution models using current environmental information on topography, soil, climate, microclimate and stand structure, and interpolate the present tree species occurrence in the regeneration across Bavaria. Furthermore, we compare available tree species composition against targets for climate-adapted forests and analyse how browsing intensities influence the species composition in the regeneration.