

PROJECT INFORMATION

Project title: **BayForDemo - Strategies for adapting Bavarian forests to climate change based on the simulation of demographic processes**

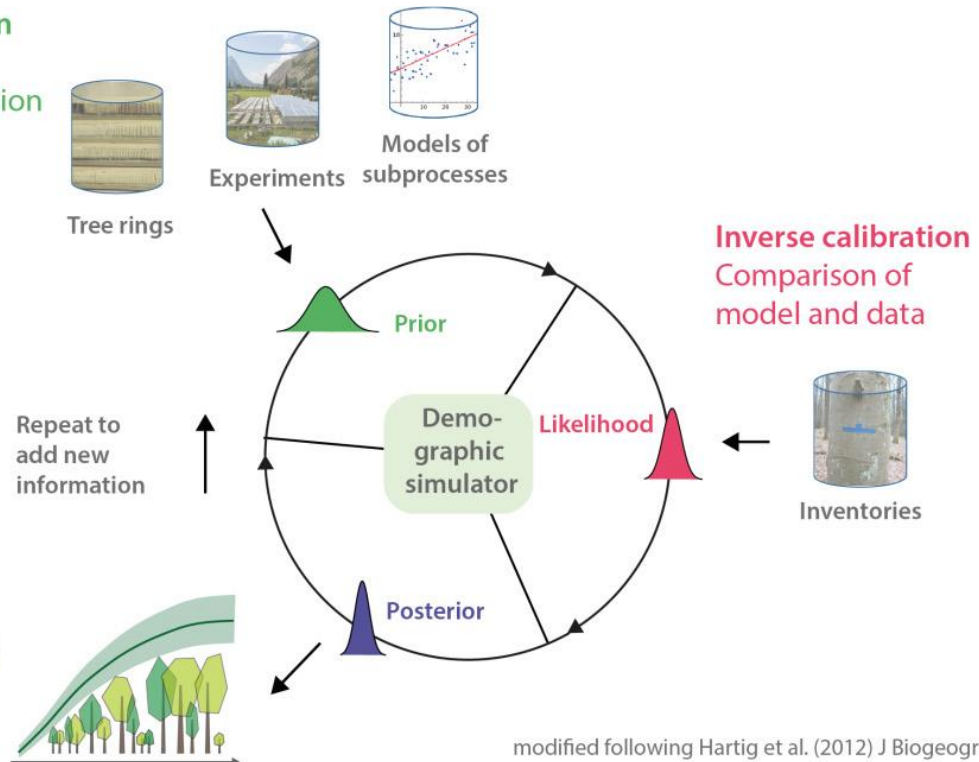
Project ID: 162

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PROJECT DESCRIPTION

Aim of the project BayForDemo is strengthening the link between forest simulation models and forest data to obtain robust projections of forests under climate change. To this end, a large variety of forest data sources will be combined using Bayesian methods to calibrate a demographic simulation environment that describes tree growth, mortality and regeneration in response to climate and biotic interactions. This approach allows for an improved understanding of the demographic diversity of European tree species, the intraspecific variability and the effects of environmental drivers. Furthermore, the strongly data-driven projections of forest development have a high potential to improve the identification of vulnerable forests, the selection of tree species and the quantification of productivities in an altered climate. Adaptive management strategies and recommendations will be developed for the model region Bavaria / Germany contributing to the maintenance forest functioning in the future.

Direct calibration
Integration of
existing information



The ICP Level I and II data will be used in combination with other forest datasets, particularly National Forest Inventories (NFIs), local forest inventories, regeneration surveys and dendrochronological data from managed and unmanaged forests in Europe to calibrate the demographic simulator developed in the project. Using a Bayesian calibration framework will allow for a flexible data assimilation so that

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observations at different levels (e.g. individual or stand level) can be combined to directly and indirectly quantify the parameters of the demographic rates (see figure). As driving forces, European soil and climate data and downscaled climate projections will be used.

Project team

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Further links

- Homepage of the project BayForDemo
- Bavarian network for climate research bayklif
- Junior research group BayForDemo on the bayklif webpage