

ReForMit - Understanding and securing the Resilience of Forest-based climate change Mitigation

Climate mitigation in forest systems is critical for limiting global warming and has important implications for biosphere functions such as freshwater and biodiversity. However, there are major knowledge gaps with regard to the future resilience of forest-based interventions - i.e., their capacity to remain functional in delivering desirable water-climate-biodiversity functions despite natural and anthropogenic perturbations.

ReForMit (understanding and securing the Resilience of Forest-based climate change Mitigation) aims to close these gaps, by generating knowledge on how to safeguard the biophysical and social-ecological resilience of forest-based climate change mitigation measures under shifting hydroclimatic conditions including ecological droughts.

ReForMit is organized into five work packages (WPs) to support a more holistic consideration of biophysical and social-ecological resilience implications of forest measures under a shifting hydroclimate.

Across the five work packages we use a combination of Earth system model (POEM), global dynamic vegetation model (LPJmL) with enhanced representation of ecological adaptation, empirical data analyses, atmospheric moisture tracking tool (WAM2layers), and stakeholder engagement in case studies to co-develop scenarios and pilot social-ecological resilience assessment in the context of forest measures.

The scenario data that will be generated and analyzed need to be shared between partners at different European institutes (Potsdam Institute for Climate Impact Research, Stockholm Resilience Centre, Stockholm International Water Institute, KTH Royal Institute of Technology). We intend to use cloud storage solutions at DKRZ to share data between project partners, since none of the partners hosts such a service.