

Climate change could be good news for plants due to increased atmospheric carbon dioxide, which encourages photosynthesis. But it could also lead to higher temperatures and dried-out soil—conditions that hinder plant growth. The degree to which climate change helps or hurts plants depends in part on whether forests can acclimate to shifting conditions. Researchers focused are regionally abundant types such as birch, spruce, aspen, poplar, and pine. In some of the simulations, the team enabled forests to acclimate to climate change by balancing their density and tree growth with the constraints of reduced water and increased heat. In other scenarios, these characteristics remained the same, representing an inability to adapt to a shifting climate.