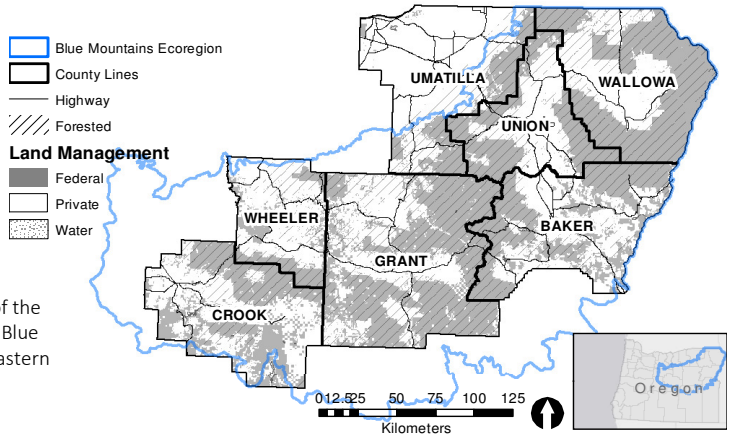
CAFOR

Communities and Forests in Oregon

Background

A decade into the 21st century, rural communities are at a transition. Traditional livelihoods in natural resource-based sectors have been eroded by changing markets and policies, resulting in significant demographic change. The effect of climate change on fire regimes has been exacerbated by contemporary changes in land-use patterns and fire suppression efforts, causing fuels to accumulate and risk of large fire to increase. Forecasted growth of large-scale natural disturbances in North American forests, such as insect outbreaks and catastrophic wildfire, have the potential to cause large, abrupt releases of carbon (C), accelerating future climate change. They would also inflict heavy socio-economic costs.



Our study area includes seven of the twelve counties covered by the Blue Mountains Ecoregion in northeastern Oregon.

Research Objectives

This study will provide an integrated social and biophysical assessment of vulnerability and adaptation to climate change and variability in the Blue Mountains Ecoregion of Oregon (Fig. 1). Our main objectives are to **A)** quantify the current range of variation in forest conditions with a focus on small private landowners, and assess current landowner strategies for mitigating climate variability in forest and silvo-pastoral systems; **B)** examine historic range of variation, current range of variation, and "business as usual" projections of future variability to target and prioritize strategies for improving forest resilience to an uncertain and variable future climate; **C)** use recent climate data, IPCC scenarios, and climate matching techniques to enable landowner visualization of potential climate risks over the mid-term (10-30 years); **D)** analyze multivariate relationships between perceptions of climate change and strategies for adaptation and mitigation, separately among general public and forest-landowner populations; and **E)** use our findings to probe the mindset of stakeholder groups, collaboratives, and institutions regarding climate change to learn how the uncertainty of future conditions are factored and into *and prioritized* for management decision-making.

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