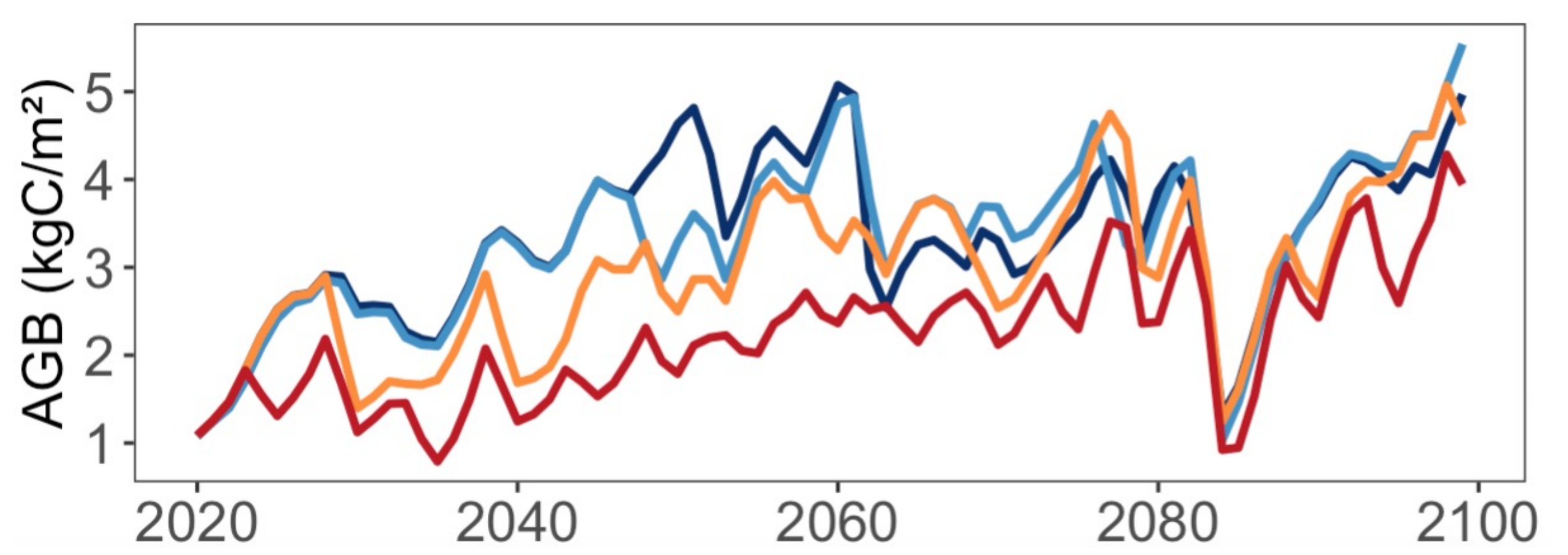
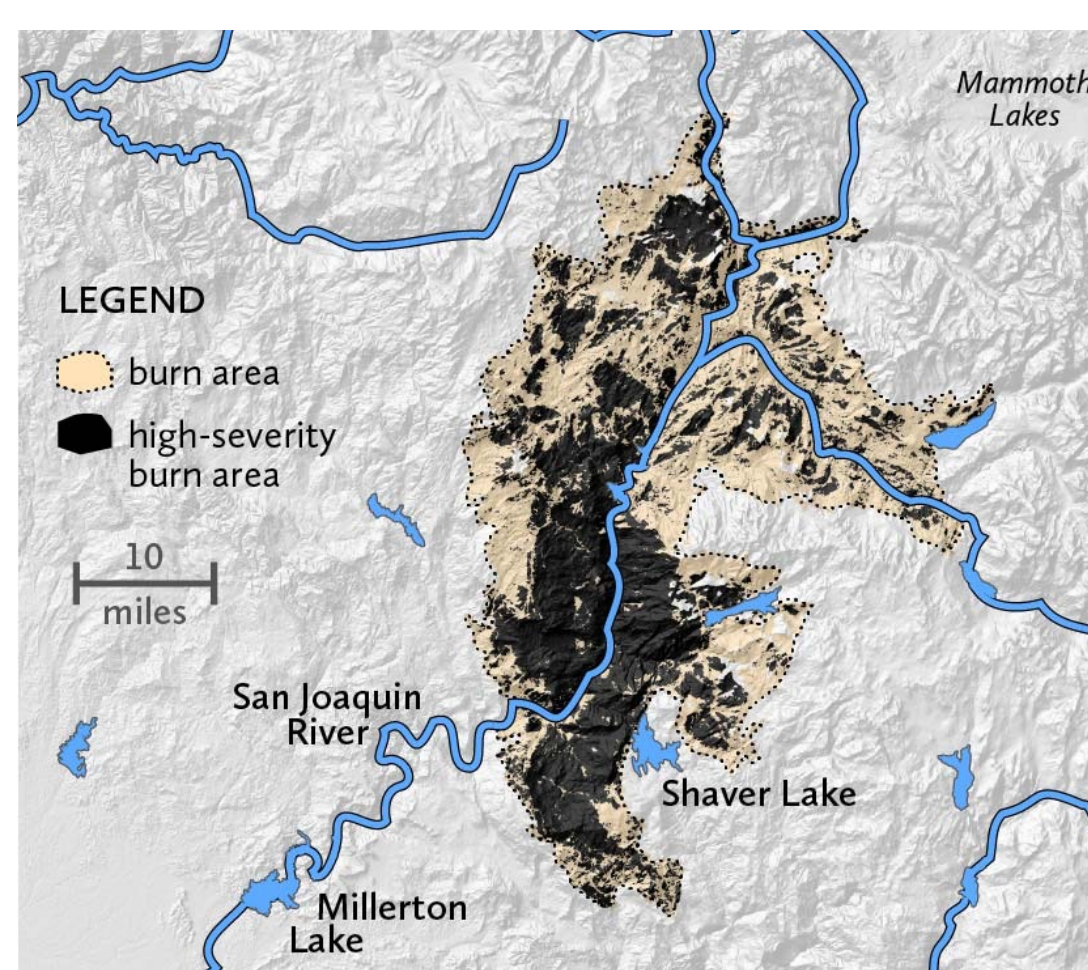


Predicting Carbon Sequestration Potential of Mountain Ecosystems

- Changing regimes of wildfire and droughts are likely to shape future carbon sequestration potential of mountain ecosystems under climate change and rising CO₂.
- Model simulations indicate that drought and fires synergistically determine Aboveground Biomass (AGB) dynamics.
- Infrequent large fires allow biomass buildup but heighten drought vulnerability, whereas frequent severe fires limit biomass and drive a shift toward structurally simpler forests.

1) Fire severity map of the Creek Fire in California's Sierra Nevada (one of the largest fire in history); 2) Simulated AGB dynamics for a grid cell within the fire area



Large Fire Scenarios — No Fire — 10-year intervals
 — 30-year intervals — 5-year intervals

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