Adapting to future fire regimes across ecosystems of the NC region

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- Brief overview of impacts of climate change and humans on wildfire
- Presentations on fire and adaptation in forests, grasslands, and sagebrush
- Breakout discussions: How can management help communities and ecosystems adapt to these changing fire conditions?

Wildfires are burning more area



Climate is a key driver of annual area burned





Colorado's <u>East Troublesome Fire</u>, started on Oct. 14, and grew to just under 200,000 acres; 2/3 in just two days, under red-flag conditions, jumping the Continental Divide at 12,000'.

Abatzoglou et al. 2021

Human-caused climate change is increasing fire activity



Anthropogenic climate change accounts for ~45% of the total forest area burned from 1984-2015

Area burned projected to increase despite fuel limitations



Abatzoglou et al. 2021

Resist, Accept, Direct Framework (RAD)



RESIST the trajectory of change, by working to maintain or restore ecosystem processes, function, structure, or composition based upon historical or acceptable current conditions.

ACCEPT the trajectory of change, by allowing ecosystem processes, function, structure, or composition to change, without intervening to alter their trajectory.

DIRECT the trajectory of change, by actively shaping ecosystem processes, function, structure, or composition towards desired new conditions.

Breakout discussions

- How can management help communities and ecosystems adapt to these changing fire conditions?
- What adaptation strategies have you implemented and what have been the outcomes?
- What barriers are there to using management to help communities and ecosystems adapt to changing fire conditions?