

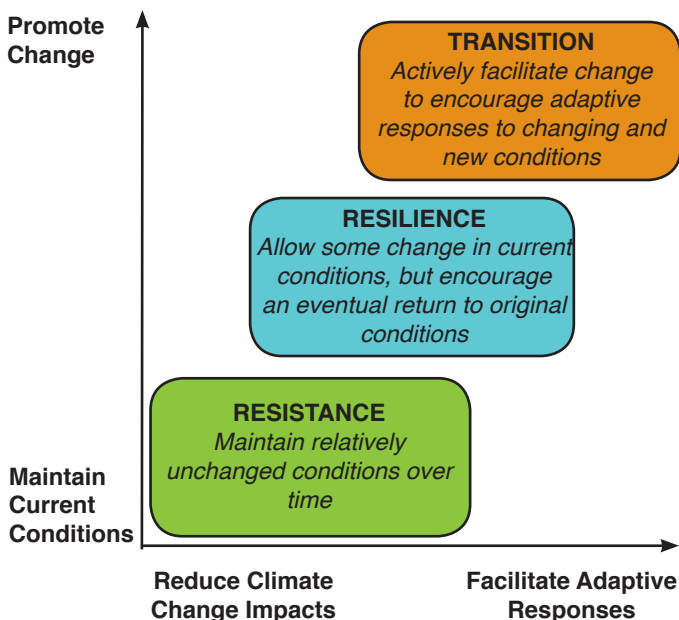
ASCC provides robust, science-based examples of how climate change adaptation can be integrated into silvicultural planning and on-the-ground actions.

Project Purpose

The Adaptive Silviculture for Climate Change (ASCC) project is a collaborative effort to establish a series of experimental silvicultural trials across a network of different forest ecosystem types throughout the United States. Scientists, land managers, and a variety of partners have developed trial sites as part of a multi-region study researching long-term ecosystem responses to a range of climate change adaptation actions.

Adaptation Options

What approach best prepares forest ecosystems for climate change? The ASCC project utilizes adaptation options that occupy a continuum of management goals related to desired levels of change.



Primary Objectives

- Create a multi-region study with locally-suited climate change adaptation treatments, using input from an expert panel of regional scientists and local managers.
- Introduce natural resource managers to concepts, approaches, and tools that help integrate climate change into resource management and silvicultural decision making.



Project Impact

This project provides managers and scientists with training on integrating climate change considerations into planning processes and identifying locally appropriate actions for a changing climate. Treatments and findings from this study will become part of an active network of long-term silviculture research and create an experimental design model for research on forest adaptation to climate change. Science-management partnerships built through this project are helping to inform research and advance communication of climate change adaptation at the national scale.

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ASCC Project Locations

Flathead National Forest / Coram Experimental Forest, MT

- Western larch and mixed-conifer forests
- Climate concerns include uncertain precipitation patterns, earlier snowpack melts, and increased risk of wildfire

Site Leads

[Elaine Sutherland](#) & [Terrie Jain](#)

USFS Rocky Mountain Research Station

Cutfoot Experimental Forest / Chippewa National Forest, MN

- Red pine-dominated stands
- Climate concerns include increased drought stress, increased risk of wildfire, and increased insect and disease outbreaks

Site Lead

[Brian Palik](#) USFS Northern Research Station

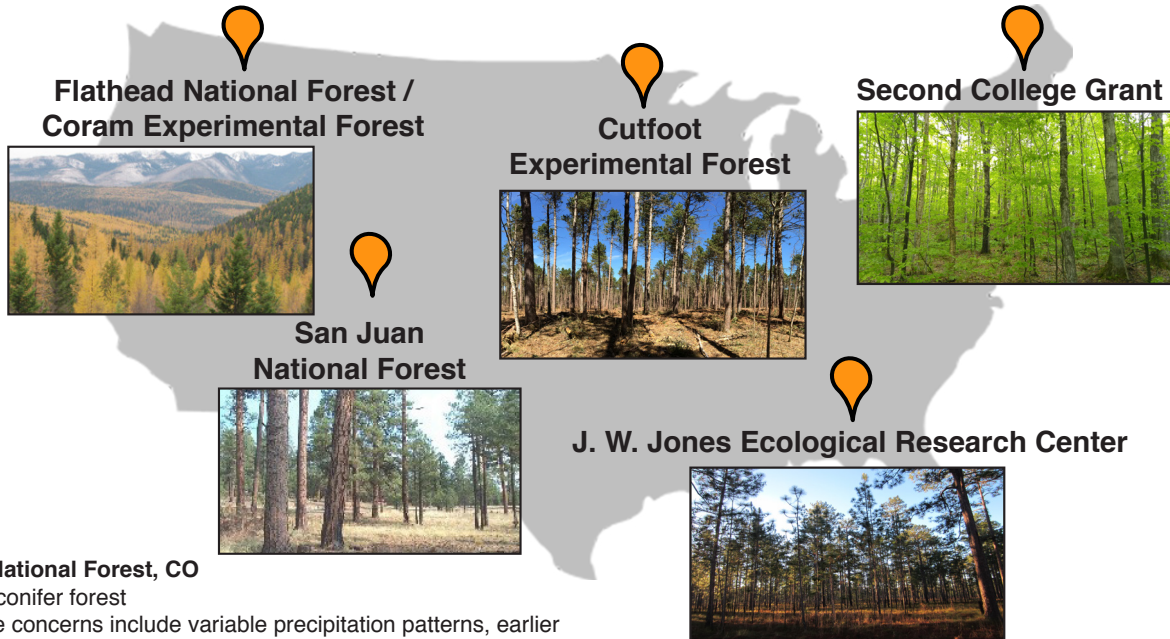
Second College Grant / Dartmouth College, NH

- Northern hardwood forest
- Climate concerns include increased wind and ice events, increased drought stress, and loss of key ecosystem service species

Site Leads

[Chris Woodall](#) USFS Northern Research Station

[Tony D'Amato](#) University of Vermont



San Juan National Forest, CO

- Mixed conifer forest
- Climate concerns include variable precipitation patterns, earlier snowmelt, increased risk of wildfire and insect outbreaks

Site Lead

[Mike Battaglia](#) USFS Rocky Mountain Research Station

Study Design

The ASCC study is designed to maintain certain factors that are consistent across all study sites while allowing individual sites to tailor treatments to their unique contexts. All ASCC sites have the same experimental approach and study design structure. The specifics of each ASCC site's treatments are developed by a working-group of key local and regional scientists and managers. Treatments are designed with site-specific desired future conditions in mind, using silvicultural tactics to meet the management objectives identified. Site managers develop a monitoring plan that meets the standards of the common study design elements and allows scientists to draw conclusions about adaptive silviculture across forest types.

Joseph W. Jones Ecological Research Center, GA

- Mixed pine - hardwood systems of the southeastern coastal plain
- Climate concerns include increased drought severity, extreme weather events, and sea level rise

Site Leads

[Steve Jack](#) & [Seth Bigelow](#) J.W. Jones Ecological Research Center

Progress & Next Steps

Workshops were held at the initiation of each study trial to familiarize local managers and scientists with adaptation approaches for forest management. These groups then worked collaboratively to develop specific treatments for each silvicultural trial, which included designing *resistance*, *resilience* and *transition* management strategies currently being implemented at each site.

Learn More

For more information on the ASCC approach and the ASCC project sites, go to:

www.forestadaptation.org/ascc

