

# Convergent Pyroscaapes | #2331874

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## Project Description

This work supports the re-Indigenization of fire science, management, & STEM education. The project makes use of modeling tools to simulate the application of Native fire technology in the novel forest conditions that have arisen since its widespread suppression on the landscape.

## Goals

- (1) To reveal and dismantle the conceptual blinders that currently constrain Western fire science and hinder Native students' STEM engagement
- (2) To generate innovative, inclusive fire science advances that expand the scope and predictive capacity of fire modeling, e.g. by simulating scenarios that both extend beyond conditions observed empirically under current fire regimes, and are based on Native science and technology
- (3) To enhance the participation of and career pathways for Native youth in forestry and natural resource management by integrating Native and Western scientific knowledge in convergent STEM curricula.

## Audience & Settings

**Audience:** Eastern Band of Cherokee Indians (Natural Resource Department, forest users, youth, teachers, elders, community members)

**Disciplinary area:** Integrative Conservation, Education

**Learning environment:** Forest, High Schools, Technical College

## Access and Inclusion

The project will use Indigenous-led, culturally responsive facilitated workshops and collaborative co-design methodologies to: broaden and build equitable partnerships; share and synthesize foundational knowledge and perspectives; and co-develop robust plans for a Phase 2 proposal.

# Convergent Pyroscaapes: Catalyzing Innovative and Inclusive Wildland Fire Science and Education in Western North Carolina

## Goal 1: Reveal & Dismantle Conceptual Blinders

- ❖ Analyze lived experiences (bias), prescribed fire training materials, fire science, agency rules
- ❖ Develop **decolonial & convergent fire glossary**

## Goal 2: Modelling Native Technology under Novel Ecological Conditions

- ❖ **Simulating outcomes** from applying Native fire technology under novel forest conditions
- ❖ **Scenario testing** to enhance Tribal forest values

## Goal 3: Co-develop convergent STEM curricula for Native youth

- ❖ **Co-construction & piloting of informal & formal STEM curricula to inspire EBCI youth:** *intergenerational knowledge sharing; prescribed burning; integrating youth into EBCI-USDA FS efforts to re-Indigenize forestry within Nantahala-Pisgah National Forest*

## Broader Impacts Targets:

- ❖ EBCI careers in forestry & STEM
- ❖ Tribal relations & values restored on national forests