

Climate Adaptation Decision Frameworks: Resist-Accept-Direct (RAD) and Resistance-Resilience-Transform (RRT)

Purpose

As climate change accelerates ecological change across landscapes, natural resource managers are increasingly challenged to make decisions in the face of uncertainty. Climate adaptation frameworks provide structured approaches for evaluating management strategies and responding to changing conditions. Two widely used frameworks, **Resist-Accept-Direct (RAD)** and **Resistance-Resilience-Transformation (RRT)**, help managers assess adaptation options, support transparent decision-making, and guide proactive planning for climate impacts.

The RAD Framework

Resist – Actively maintain or restore historical or current conditions despite climate pressures. Examples may include creating fuel breaks around high-value forest stands, protecting climate refugia, and replanting post-disturbance the same species that were present before disturbance.

Accept – Allow change to occur with limited intervention where maintaining existing conditions is impractical or too costly. Examples may include allowing vegetation shifts, accepting changes in species range, and monitoring rather than intervening.

Direct – Steer ecological or social systems toward preferred future conditions. Examples may include assisted migration, transitioning forests to climate-adapted species, and managed retreat from vulnerable areas.

The RRT Framework

Resistance – Maintain relatively unchanged conditions and reduce immediate climate impacts (similar to Resist above).

Resilience – Increase the system's capacity to absorb disturbance and recover while retaining core functions. Examples may include management actions such as thinning overly dense stands to create a mix of tree sizes, ages, and canopy layers, and promoting heterogeneous forest structure across the landscape.

Transform (Transition) – Facilitate fundamental change to a new state that is more viable under future climate conditions. Examples may include forest conversion to drought-tolerant species, reforestation with new species mixes, and creating novel forest structures.