Figures

NOTE: This information is distributed solely for the purpose of pre-dissemination peer review under applicable information quality guidelines. It has not been formally disseminated by the U.S. Environmental Protection Agency. It does not represent and should not be construed to represent any agency determination or policy.

Figures for Chapter 3, National Forests

Figure 3.1. Timeline of National Forest System formation and the legislative influences on the mission of the national forests.

Figure 3.2. Jurisdiction and organizational levels within the National Forest System.

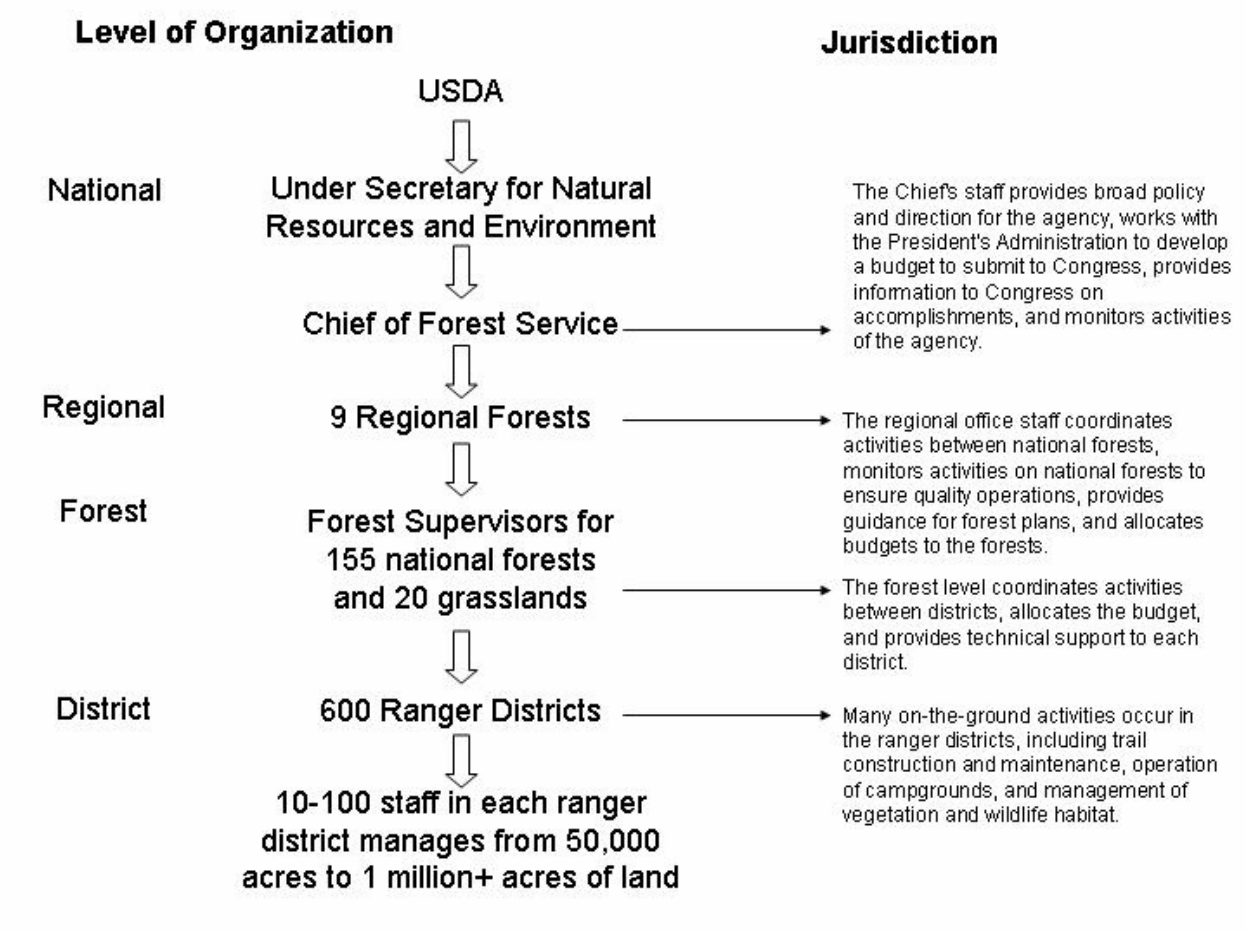


Figure 3.3. One hundred fifty-five National Forests and 20 National Grasslands across the United States provide a multitude of goods and ecosystems services, including biodiversity (USDA Forest Service Geodata Clearinghouse, 2007).

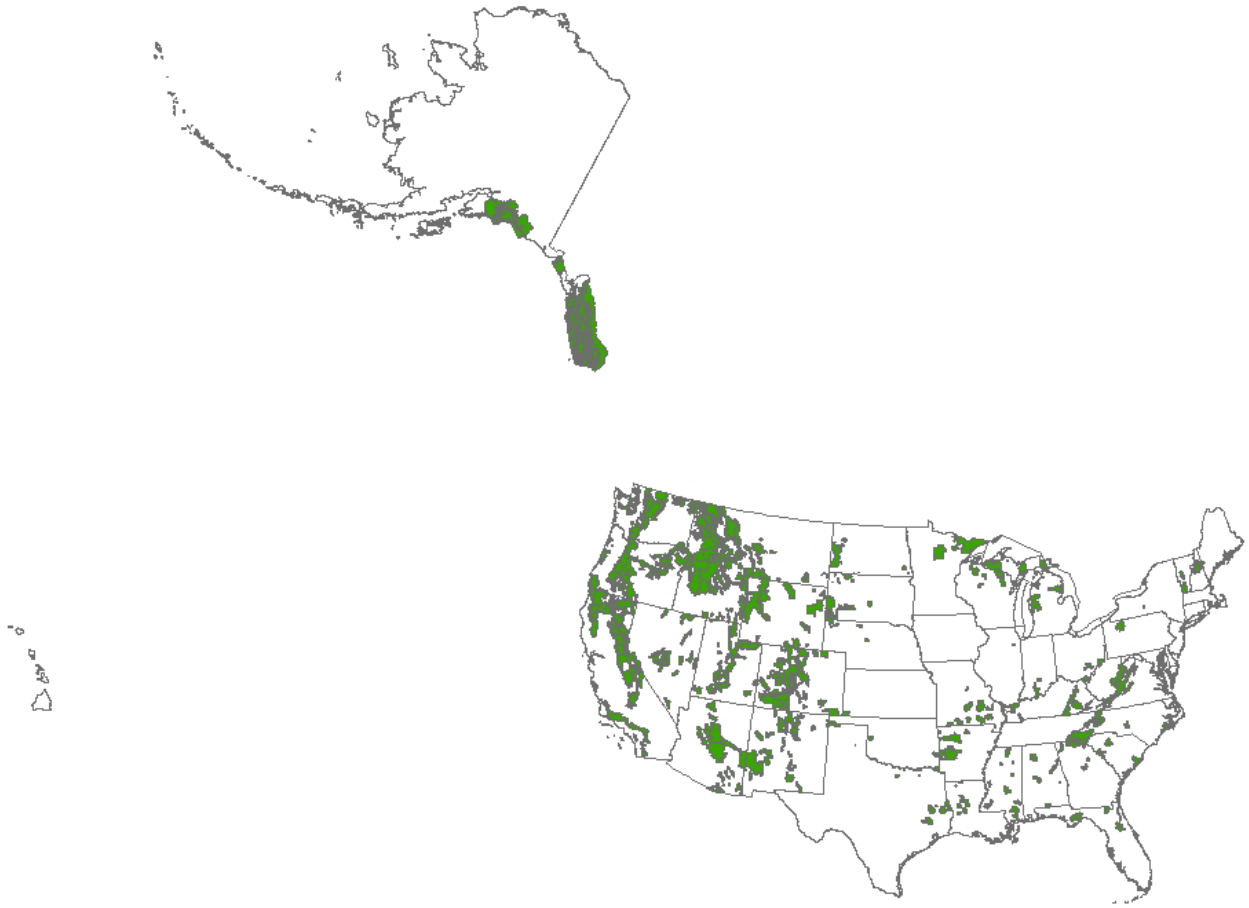


Figure 3.4. Historical harvest levels and grazing across the National Forests (USDA FS Forest Management; Mitchell, 2000).

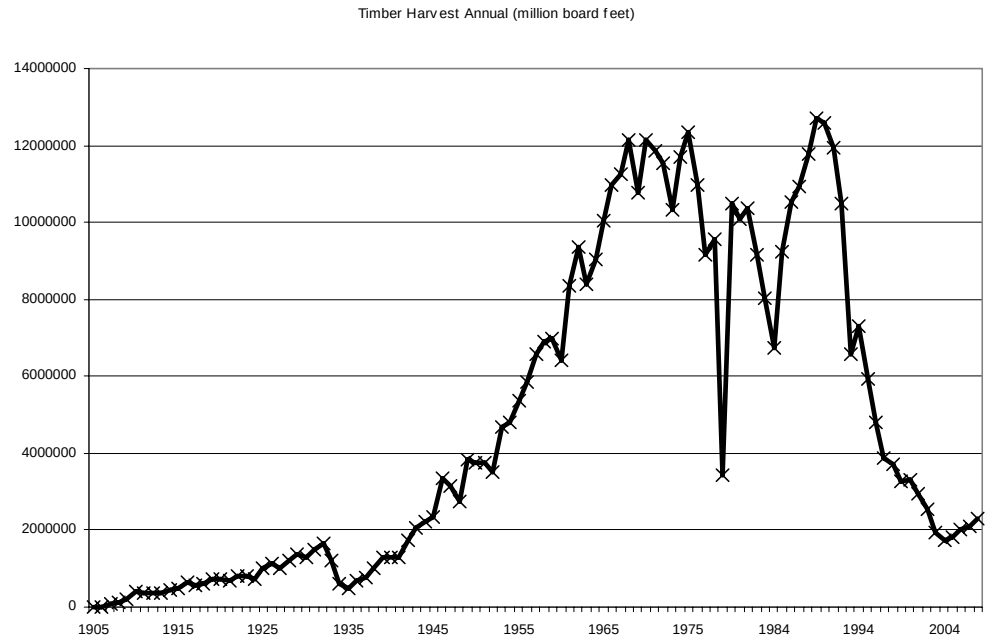


Figure 3.5. Wildland Urban Interface across the United States (Radeloff et al., 2005).

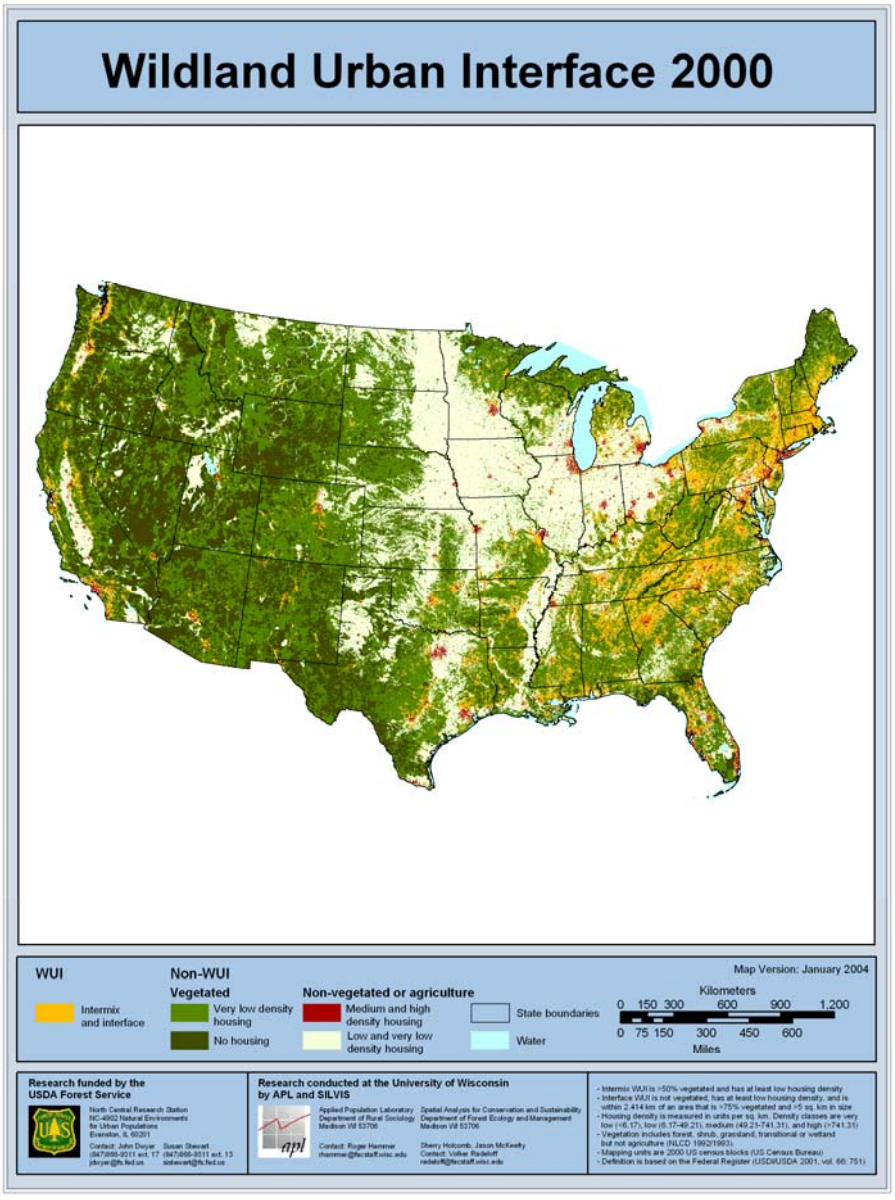


Figure 3.6. Influence of non-native earthworms on eastern forest floor dynamics (Frelich *et al.*, 2006). Forest floor and plant community at base of trees before (a, left-hand photo) and after (b) European earthworm invasion in a sugar maple-dominated forest on the Chippewa National Forest, Minnesota, USA. Photo credit: Dave Hansen, University of Minnesota Agricultural Experimental Station.

Figure 3.7. Conceptual model of the relative time scales for disturbance vs. climatic change alone to alter ecosystems. Times are approximate. From McKenzie *et al.* (2004).

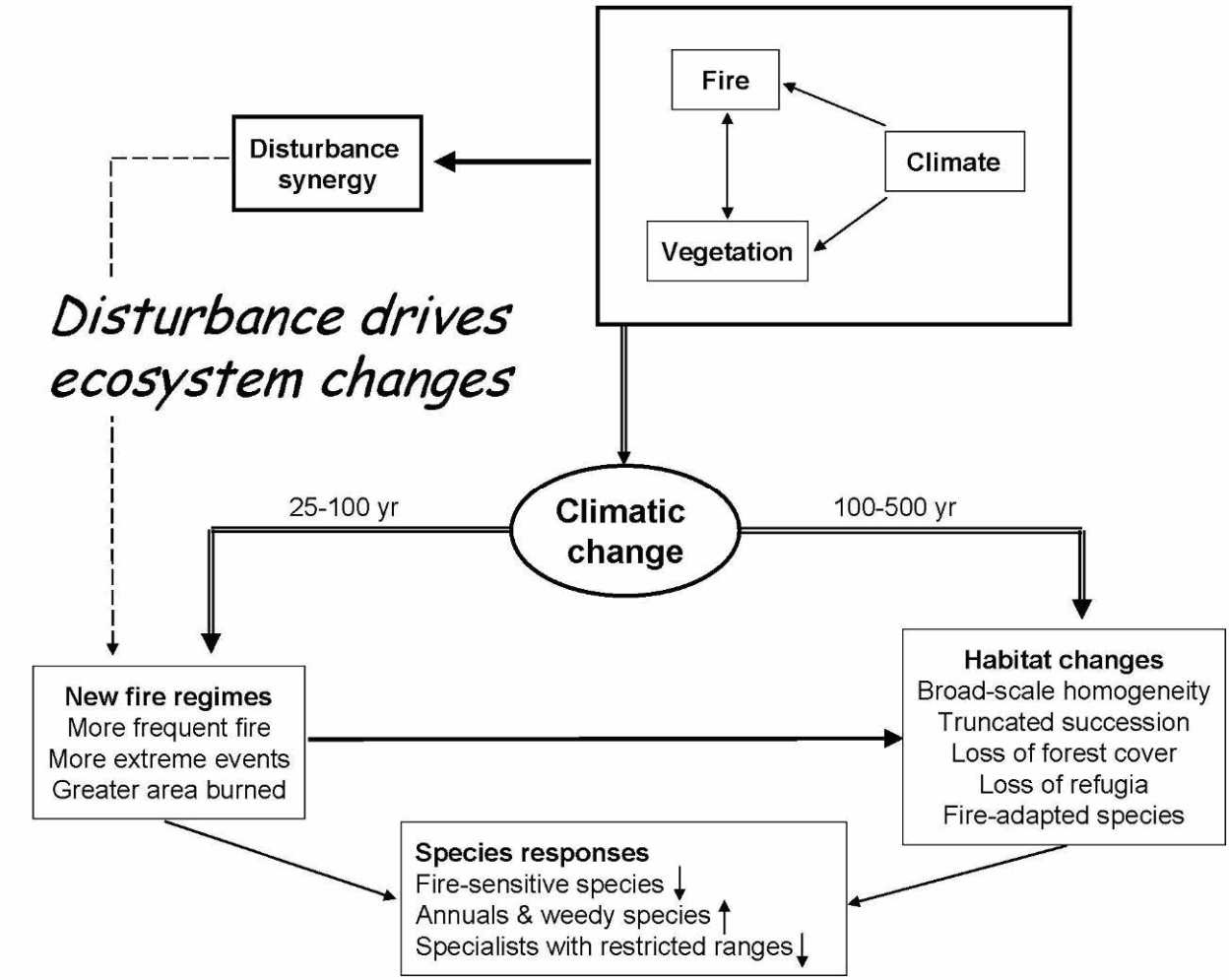


Figure 3.8. Stress complex in pinyon-juniper woodlands of the American Southwest. Adapted from McKenzie *et al.* (2004).

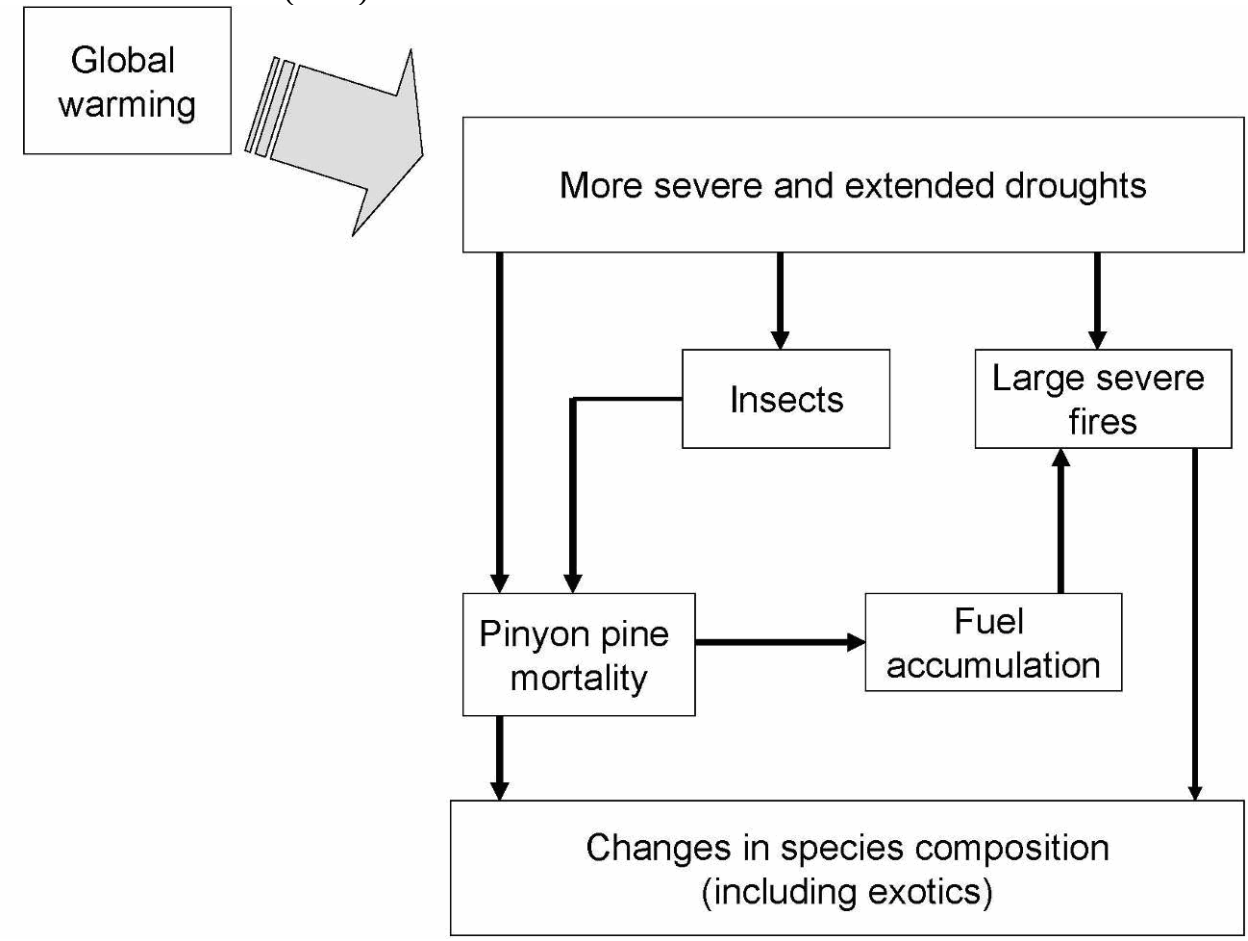


Figure 3.9. Stress complex in Sierra Nevada and southern Californian mixed-conifer forests. From McKenzie, Peterson, and Littell (In Press).

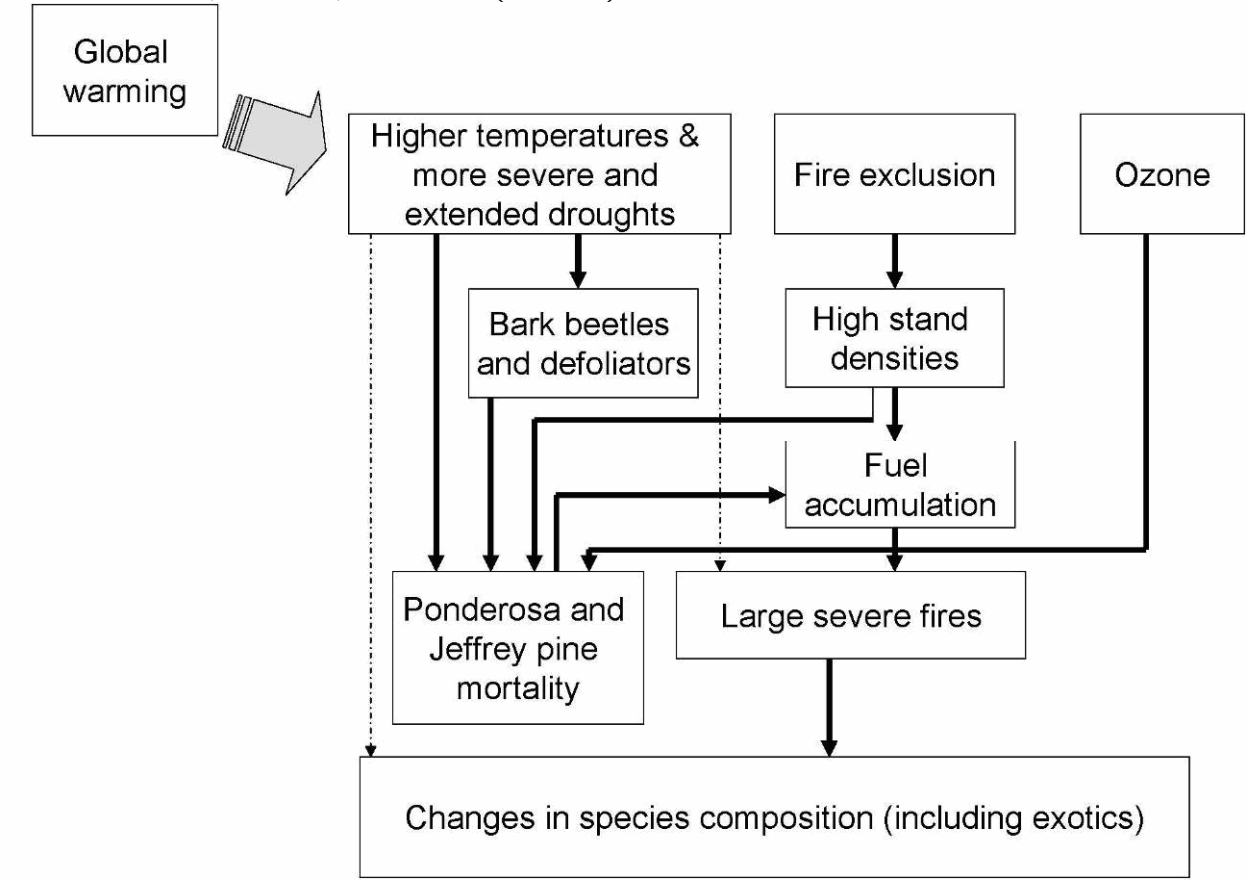


Figure 3.10. Stress complex in interior (BC and USA) lodgepole pine forests. From McKenzie, Peterson, and Littell (In Press).

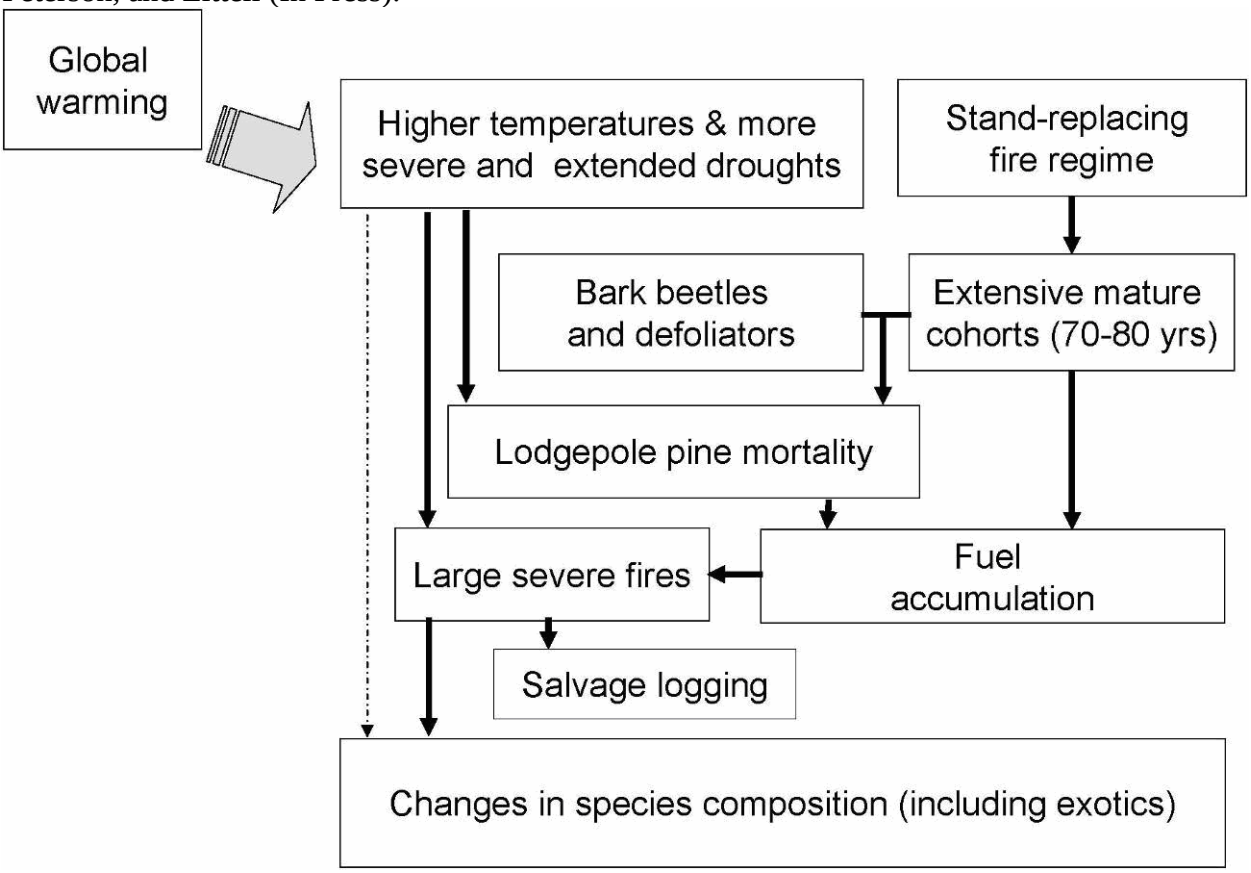
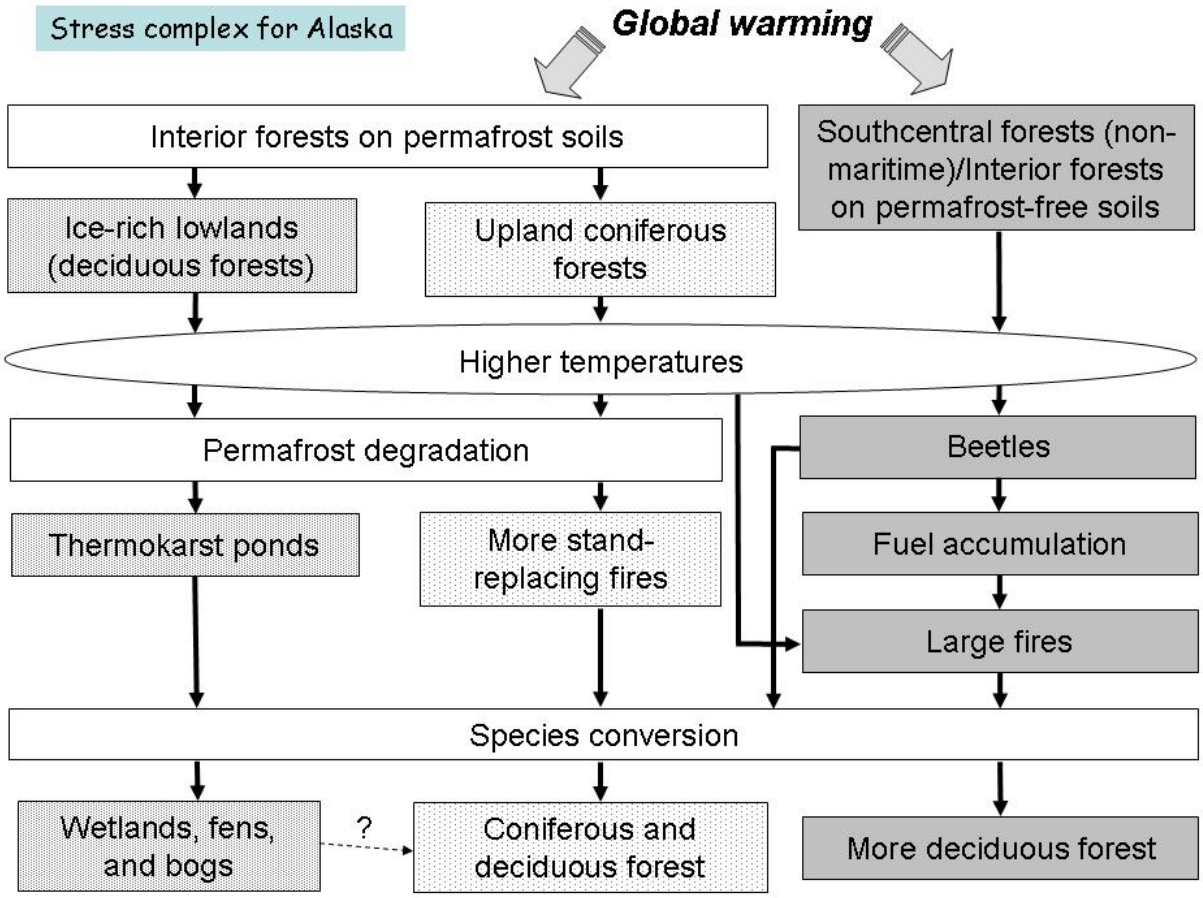


Figure 3.11. Stress complex in the interior and coastal forests of Alaska. From McKenzie, Peterson, and Littell (In Press).



1

Figure 3.12. Anticipatory and reactive adaptation for natural and human systems (IPCC, 2001).

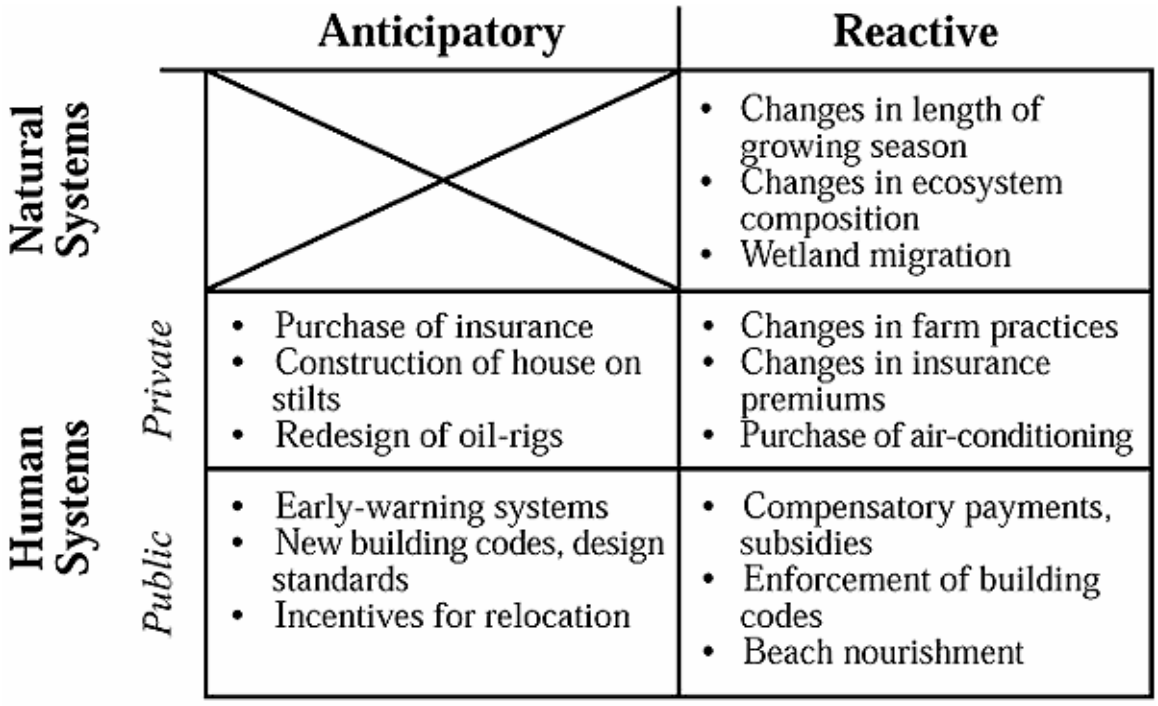


Figure 3.13. Map and location of the Tahoe National Forest, within California (a) and the Forest boundaries (b) (USDA Forest Service, 2007a; USDA Forest Service, 2007b).

a)

b)


Tahoe NF
District Boundary
Major Road
Pacific Crest Trail
Ranger Station
Visitor Center
Sierraville
Sierraville District
Camptonville
Yuba River District
Truckee
Big Bend
Truckee District
Nevada City
American River District
Foresthill

Figure 3.14. Thinned stands for fuel reduction and resilience management, part of the Herger-Feinstein Quincy Library Pilot Project. Photo courtesy of Tahoe National Forest.

Figure 3.15. Former salmon habitat (rivers marked in bold black) of the Sierra Nevada. Tahoe National Forest (TNF) rivers are scheduled to have salmon restored to them in current national forest planning. Adaptive approaches suggest that future waters may be too warm on the TNF for salmon to survive, and thus, restoration may be inappropriate to begin. Map adapted from (Sierra Nevada Ecosystem Project Science Team, 1996).

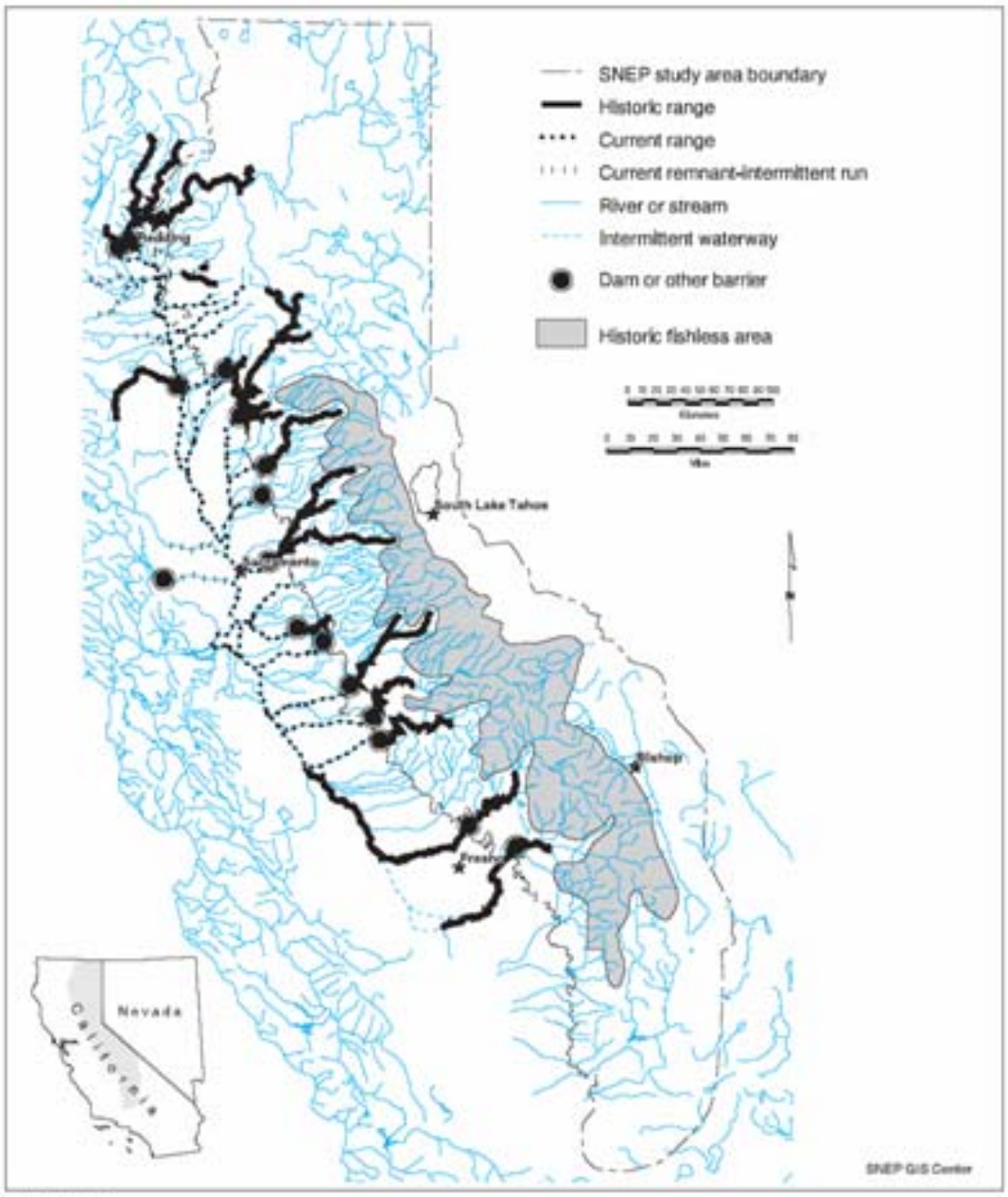


Figure 3.16. Olympic Peninsula land ownership and Northwest Forest Plan allocation map. Olympic National Forest contains lands (dark boundary) with different land use mandates and regulations. These include adaptive management areas, late-successional reserves, and Wilderness areas. Map courtesy of Robert Norheim, Climate Impacts Group, University of Washington.

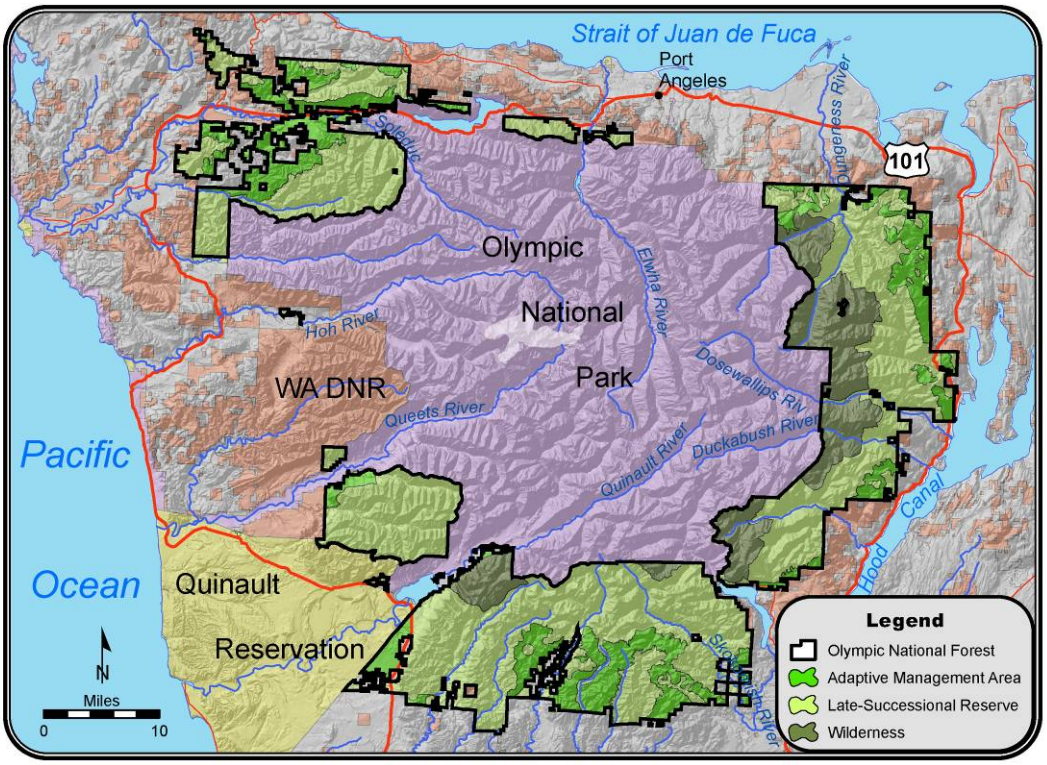


Figure 3.17. Olympic National Forest is charged with mitigating the legacy of 20th century timber harvest. Landscape fragmentation and extensive road networks (upper left) are consequences of this legacy that influence strategies for adaptation to climate change. The old-growth forest dependent northern spotted owl (upper right) is one focus of the NWFP, which prescribes forest practices but does not address climatic change. Changes in the timing and intensity of runoff expected with climate change are likely to interact with this legacy to have negative impacts on unmaintained roads (lower left) that in turn will impact water quality for five threatened or endangered species of anadromous and resident fish. Photo Credits: All photos courtesy Olympic National Forest.

Figure 3.18. Map of the Uwharrie National Forest in North Carolina (USDA Forest Service, 2007c).