

What is the Forest Service Response to Climate Change?

Elizabeth Reinhardt



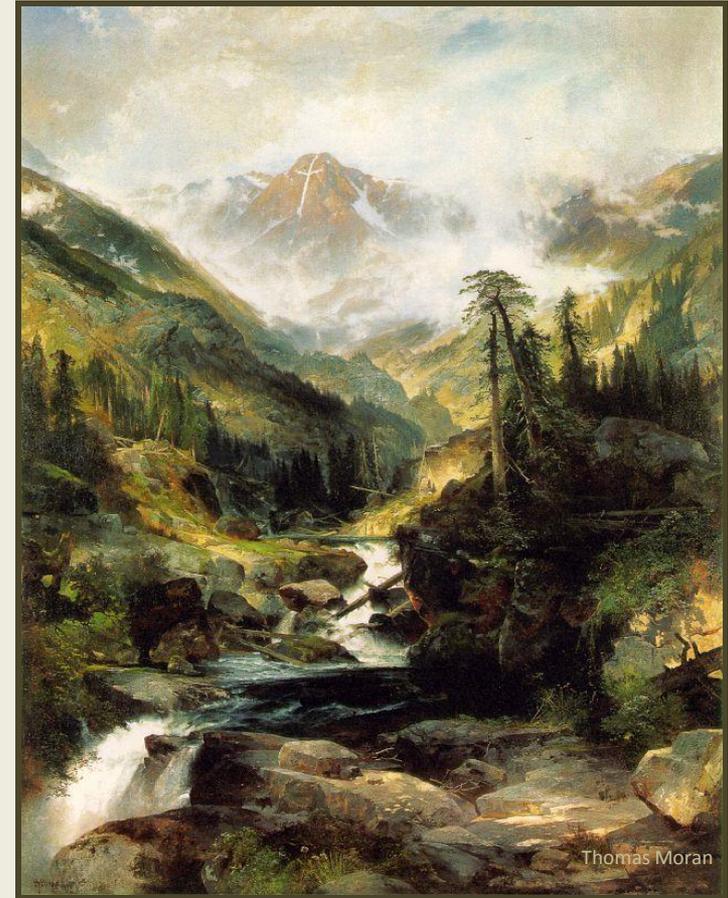
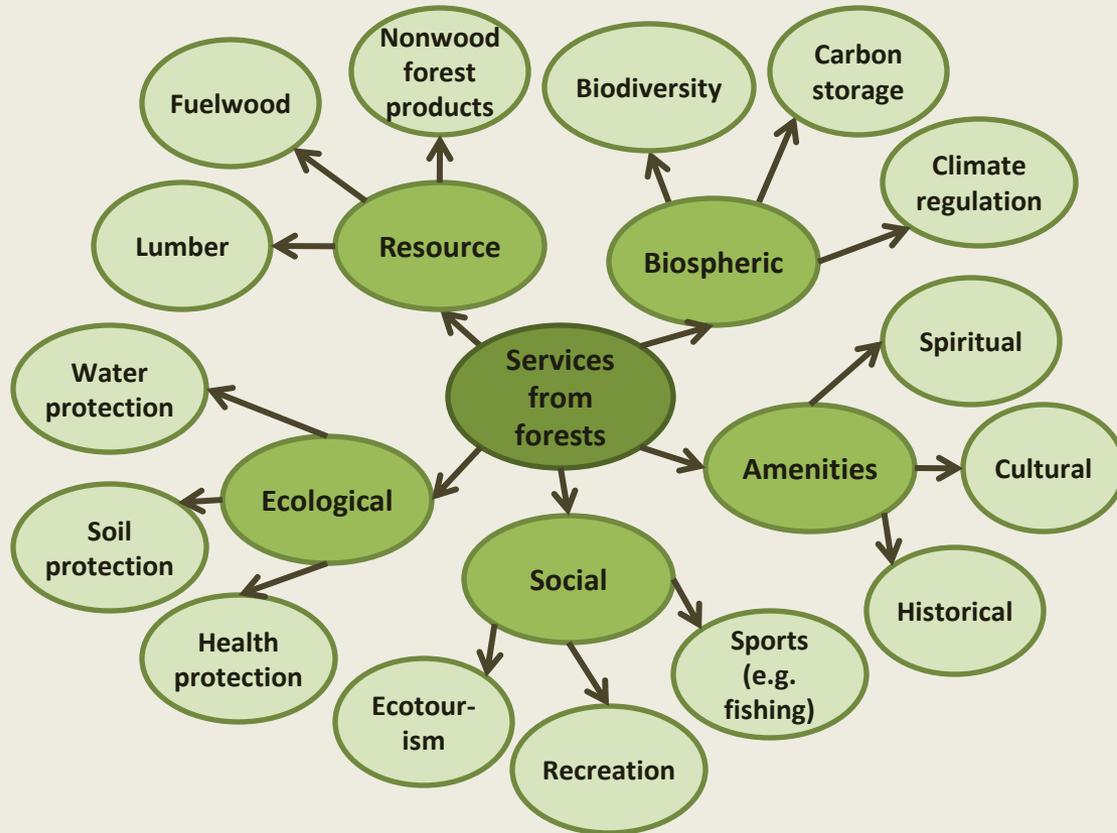
Responding to climate change is essential if the Forest Service is to fulfill its mission:

“to sustain the health, diversity, and productivity of America’s forests and grasslands for the benefit of present and future generations.”



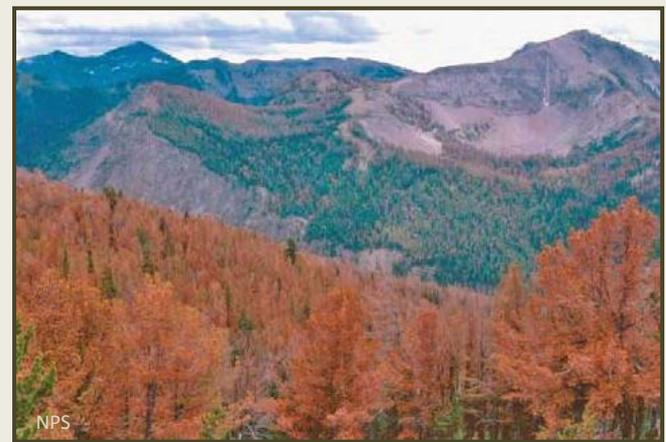
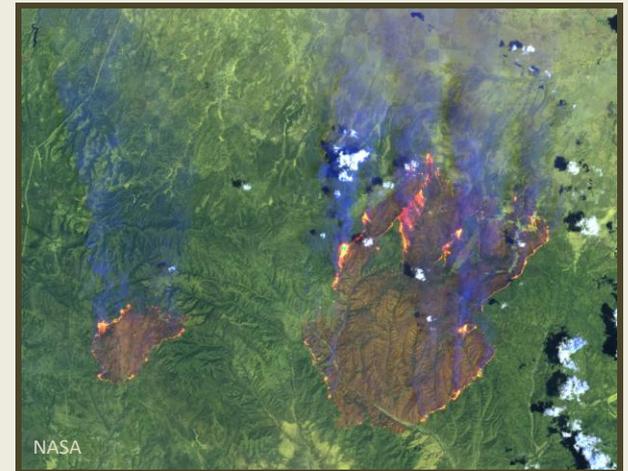
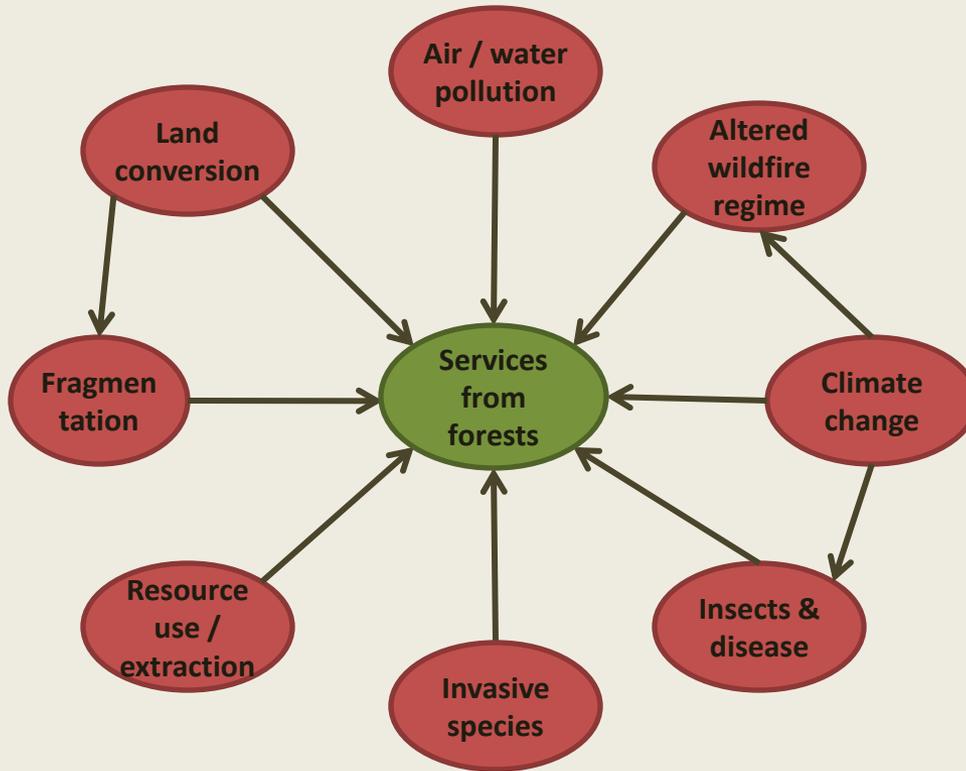
Our Nation's forests: Many values

Critical ecological and socio-economic infrastructure



Our Nation's forests: Many threats

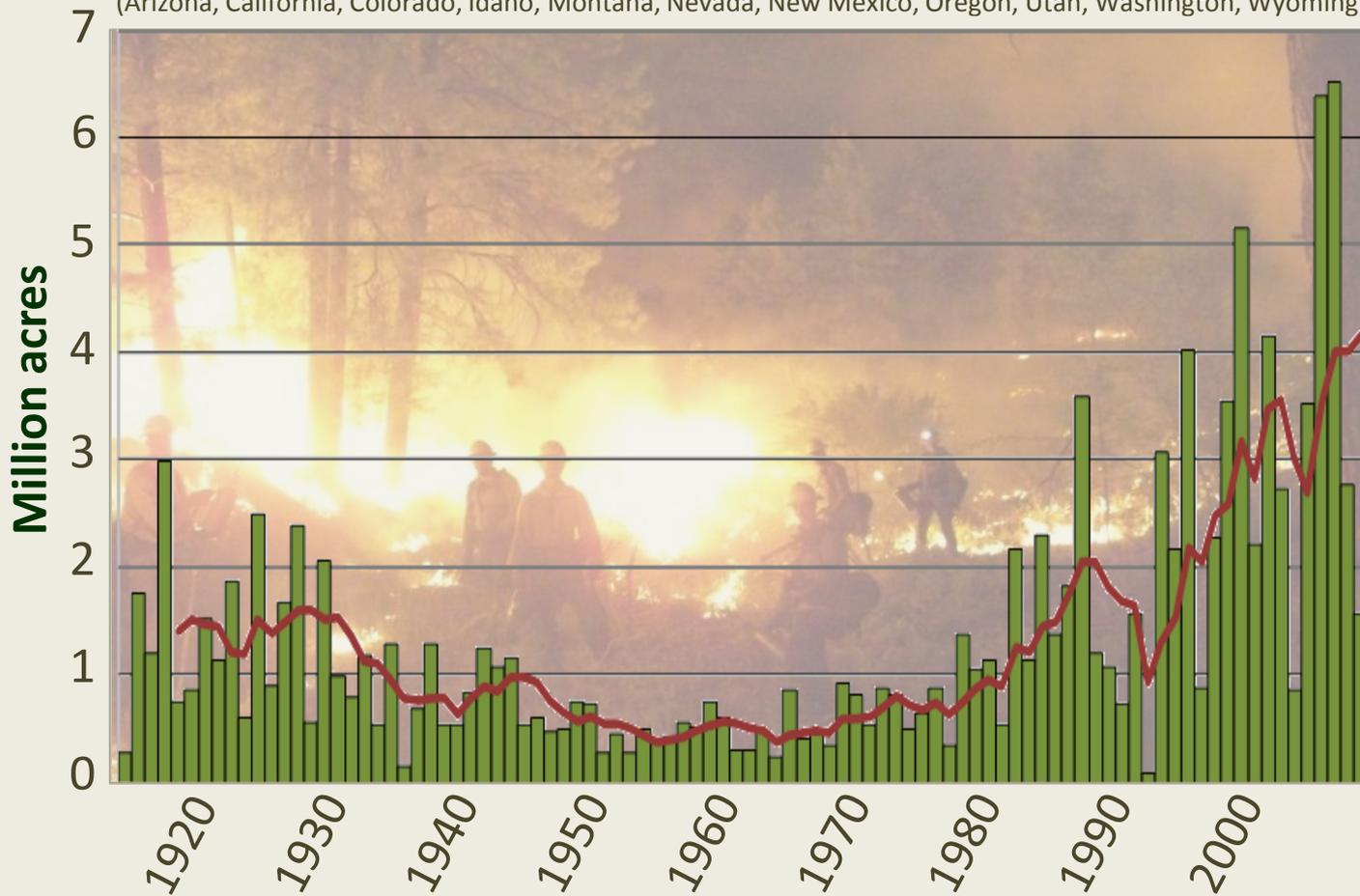
Forests are dynamic, but dynamics are changing



Threats: Wildland fires

Acres Burned in the 11 Western States

(Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming)

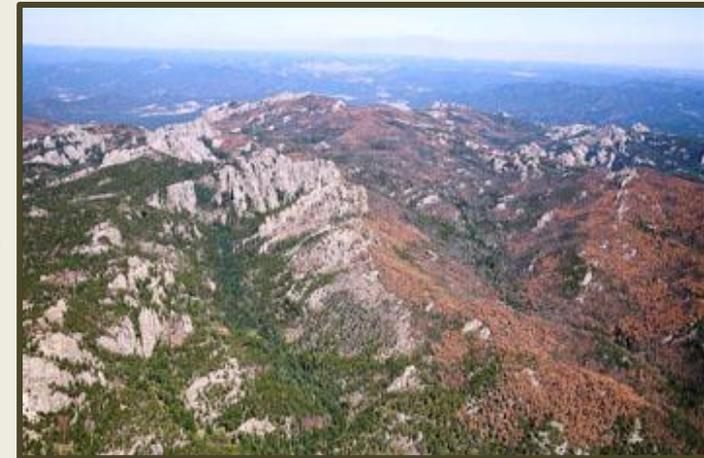
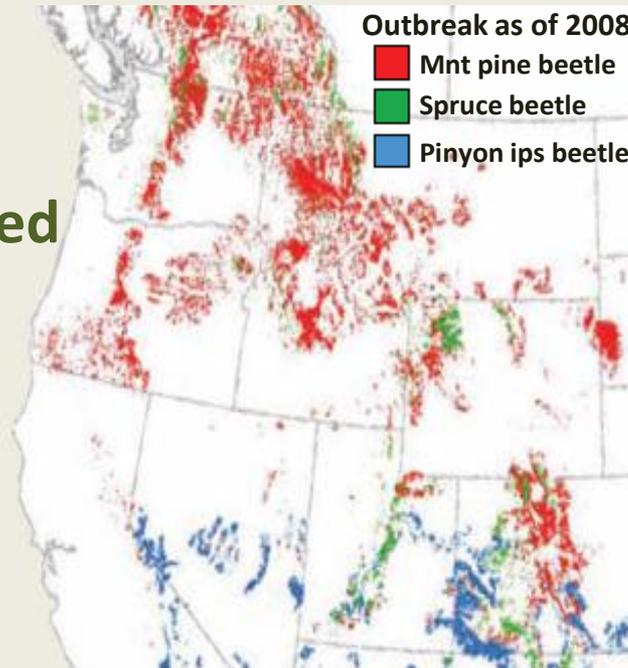


Climate change interactions



Compounded, interacting threats

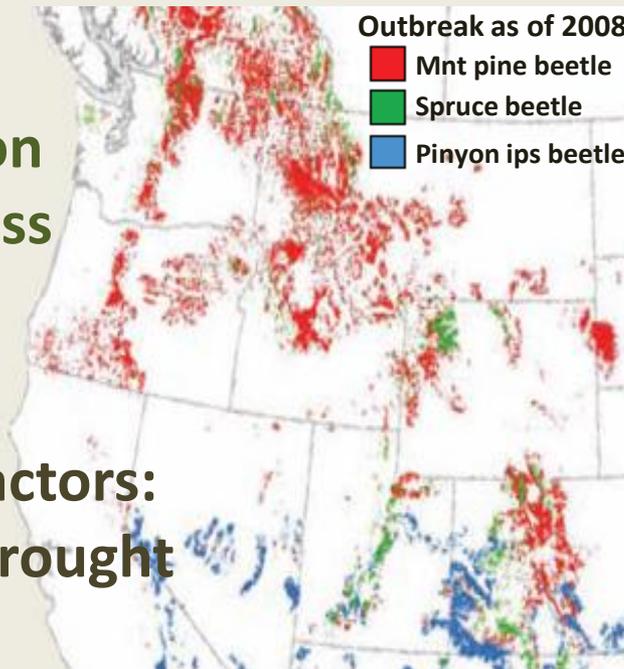
Mountain pine
beetles
17.5 million forested
acres across 6
western states



Compounded, interacting threats

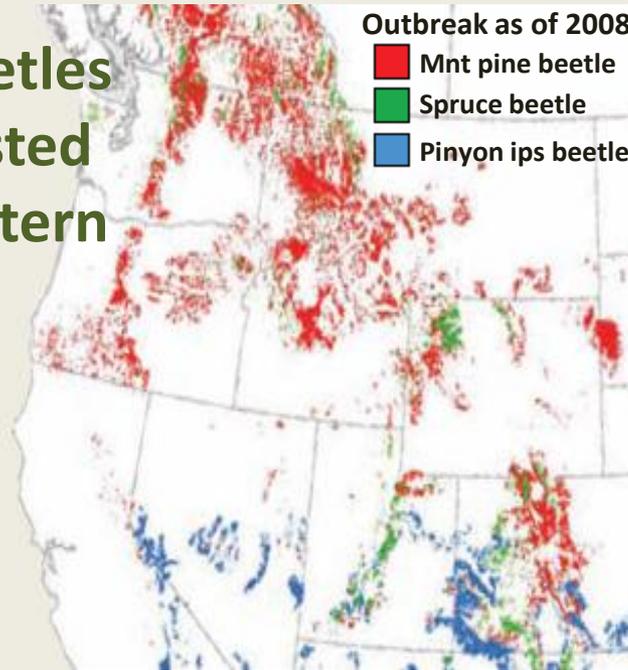
Mountain pine beetles 17.5 million forested acres across 6 western states

- Contributing risk factors:
- Climate change (drought and warmer winters)
 - Stand homogeneity
 - Disease (e.g., white pine blister rust)

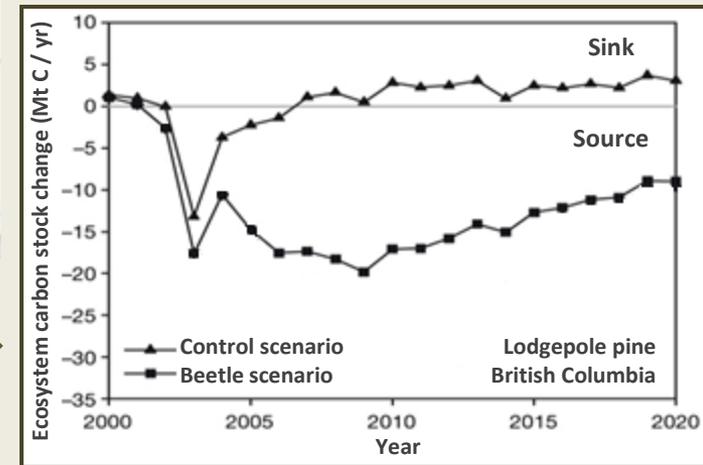


Compounded, interacting threats

Mountain pine beetles
17.5 million forested
acres across 6 western
states



Could turn some western
forests from a carbon sink to
a carbon source



Responding to climate change

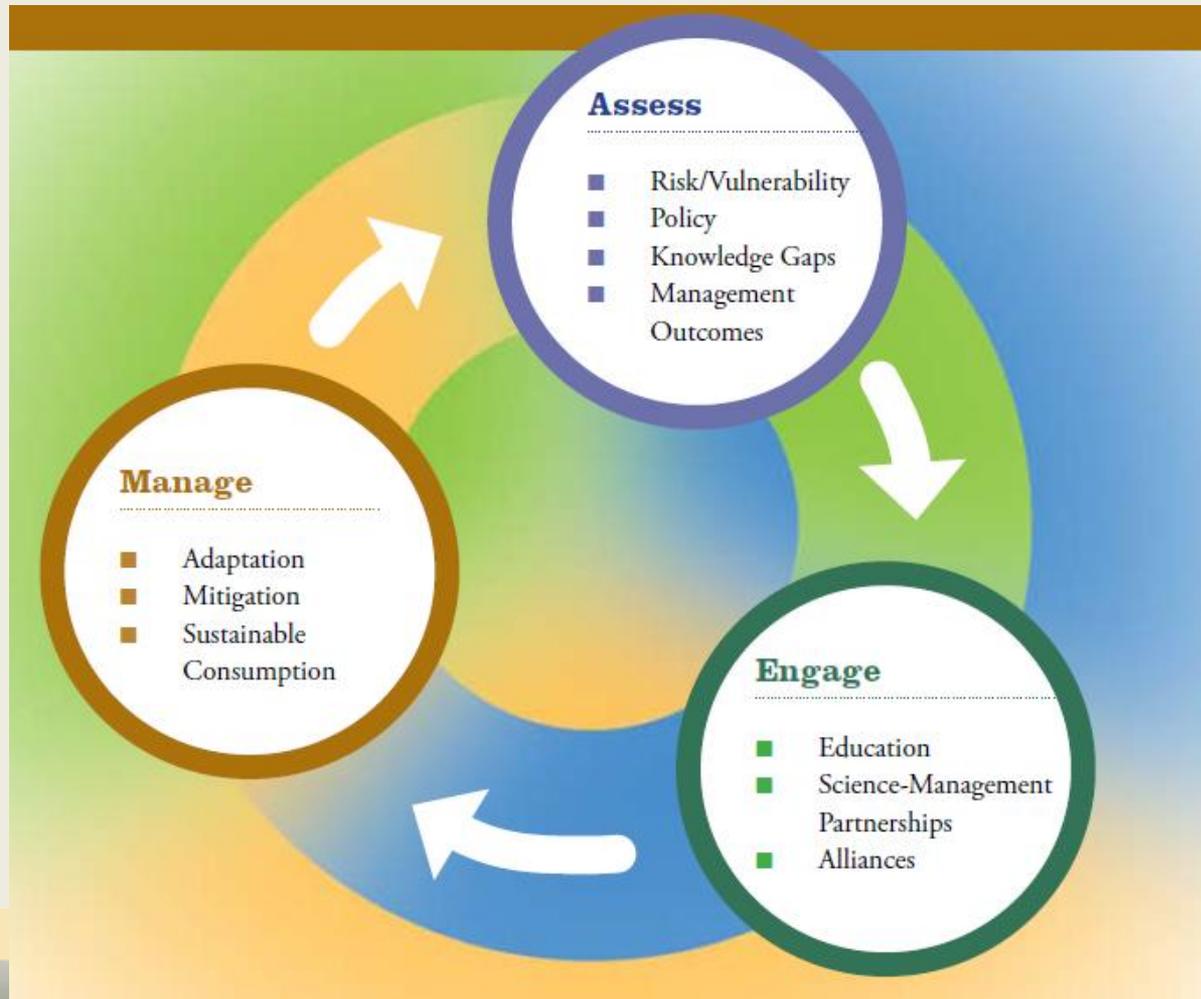
“No action in the face of climate change is a decision that may carry the greatest risk.” –Western Governors’ Association



**You can't steer the
bicycle unless you
get it moving.**

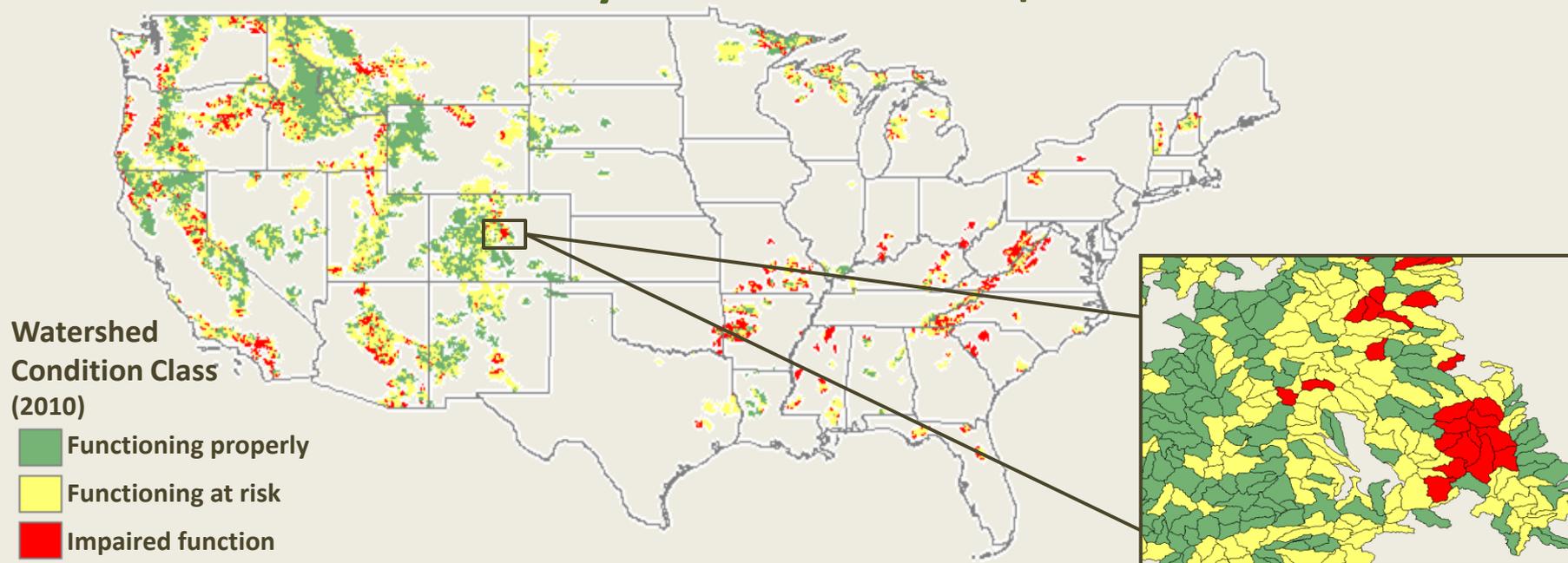


USFS strategy: Climate Change Roadmap

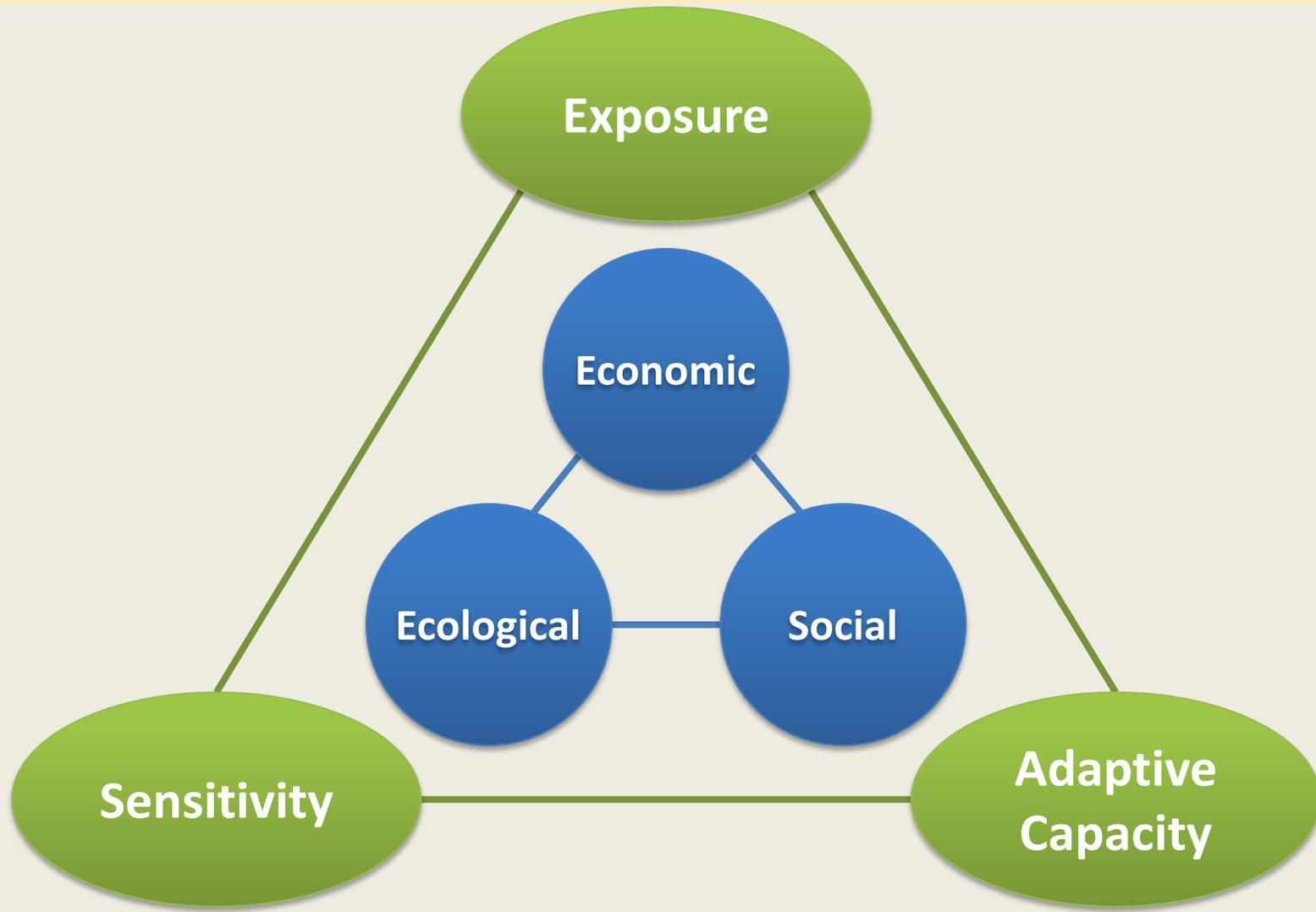


USFS strategy: Assess

- RPA Assessments—climate change scenarios
- LANDFIRE—fuel and fire data
- Carbon OnLine Estimator (COLE)—forest carbon estimates
- Watershed Condition Framework—15,000 forested watersheds
- Watershed Vulnerability Assessment— 11 pilot efforts



Vulnerability Assessment



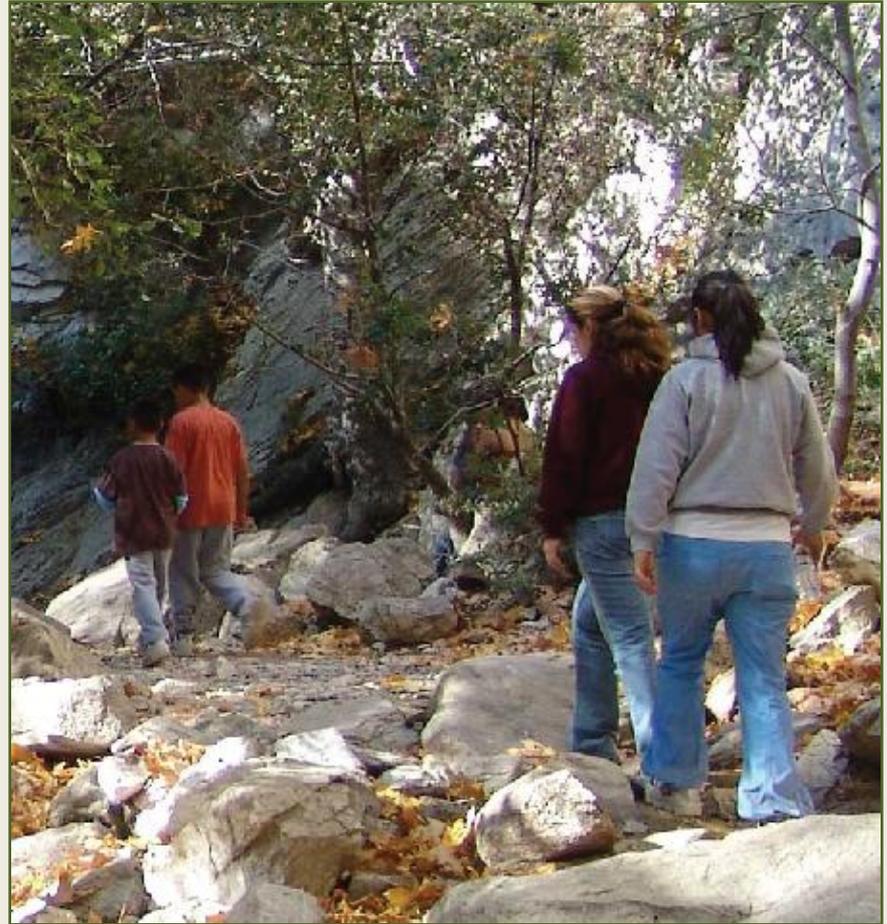
Ecological Vulnerabilities

- Potential for cascading effects
- Compounded by interactions with existing threats



Social Vulnerabilities

- Unequal impacts
- Communities vary in their capacity to prepare for and recover from extreme events
- At high risk: poor communities, rural communities, indigenous people



Economic Vulnerabilities



- Direct effects --Losses
- Shifts in economic activity--wins or losses
- Costs of responding to and recovering from extreme events can swamp our capacity for preparation
- Threats to existing infrastructure
- Opportunities await

USFS strategy: Engage

- Collaborative Forest Landscape Restoration Program—10 projects, many focusing on hazardous fuels reduction
- Stakeholder engagement in forest planning rule
- Science-management partnerships (e.g., adaptation workshop, Climate Change Interdisciplinary Team)
- Interagency efforts (e.g., Greater Yellowstone Coordinating Committee)



USFS strategy: Manage

Increase Resistance

“bounce off”

(e.g., thinning, prescribed burning, firewise houses)



Promote Resilience

“bounce back”

(e.g., plant seedlings, fire insurance)



Facilitate Transitions

“bounce forward”

(e.g., zoning changes to reduce WUI)



Performance Scorecard

To ensure accountability across the National Forest System, we have created a scorecard for measuring progress, recording achievements, and sharing lessons learned by each national forest and grassland.



Performance Scorecard

- **Flexibility**
- **Accountability**
- **Balance**
- **Integration**



Performance Scorecard

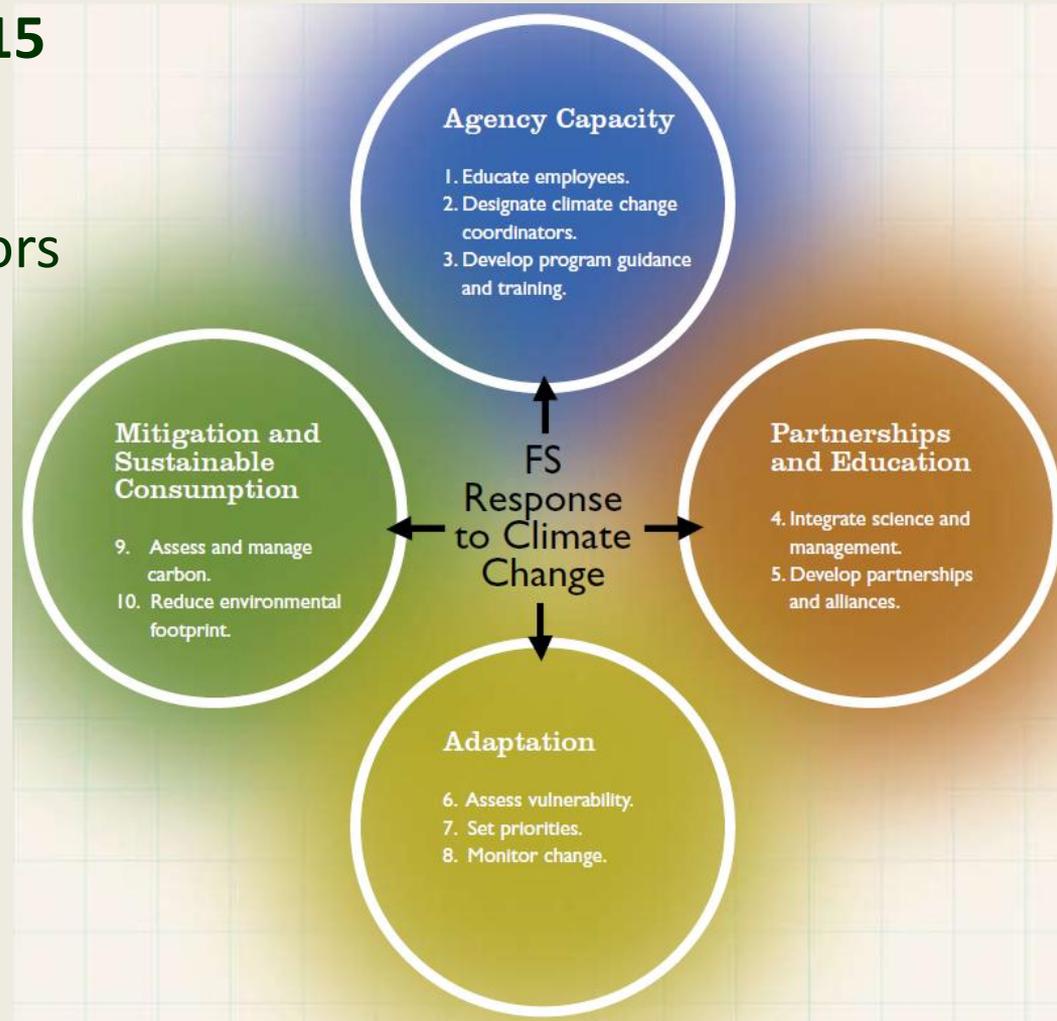
Each National Forest and Grassland will be responsible reporting annually on the scorecard, with a target of 100% compliance by 2015.



Climate Change Scorecard

Goal: Yes to 7 out of 10 by 2015

1. Employee education
2. Climate change coordinators
3. Plans of work
4. Science and management
5. External partnerships
6. Vulnerability assessment
7. Adaptation activities
8. Monitoring
9. Carbon assessment
10. Sustainable operations



Scorecard Preliminary Assessment

March 2011: Percentage of Forests Meeting Each Goal

