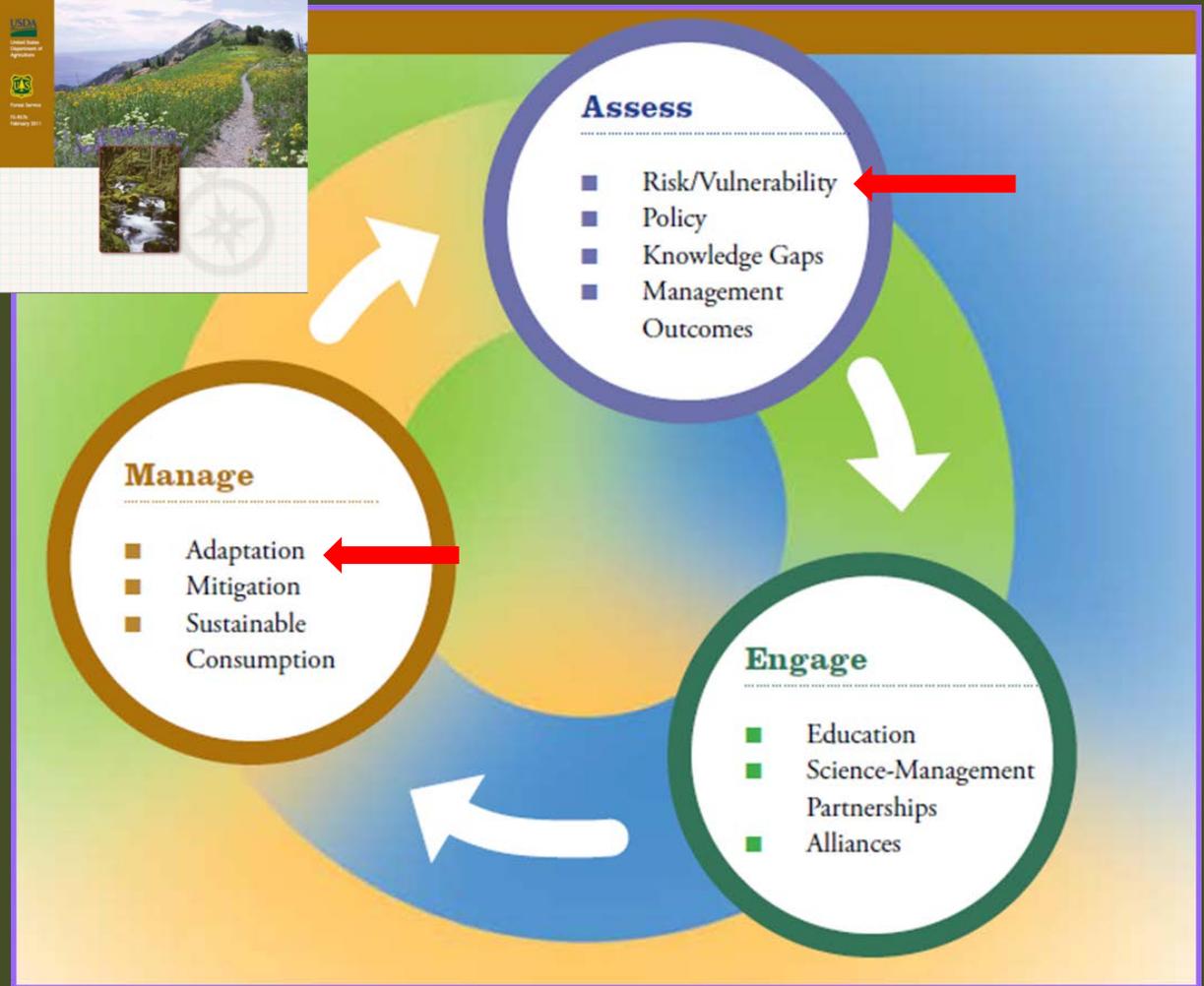
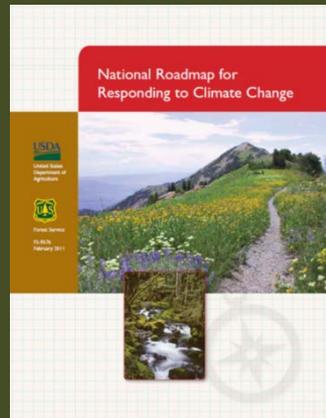


Water Resources Adaptation to Climate Change U.S. Forest Service Approach



Changing Forests... Enduring values

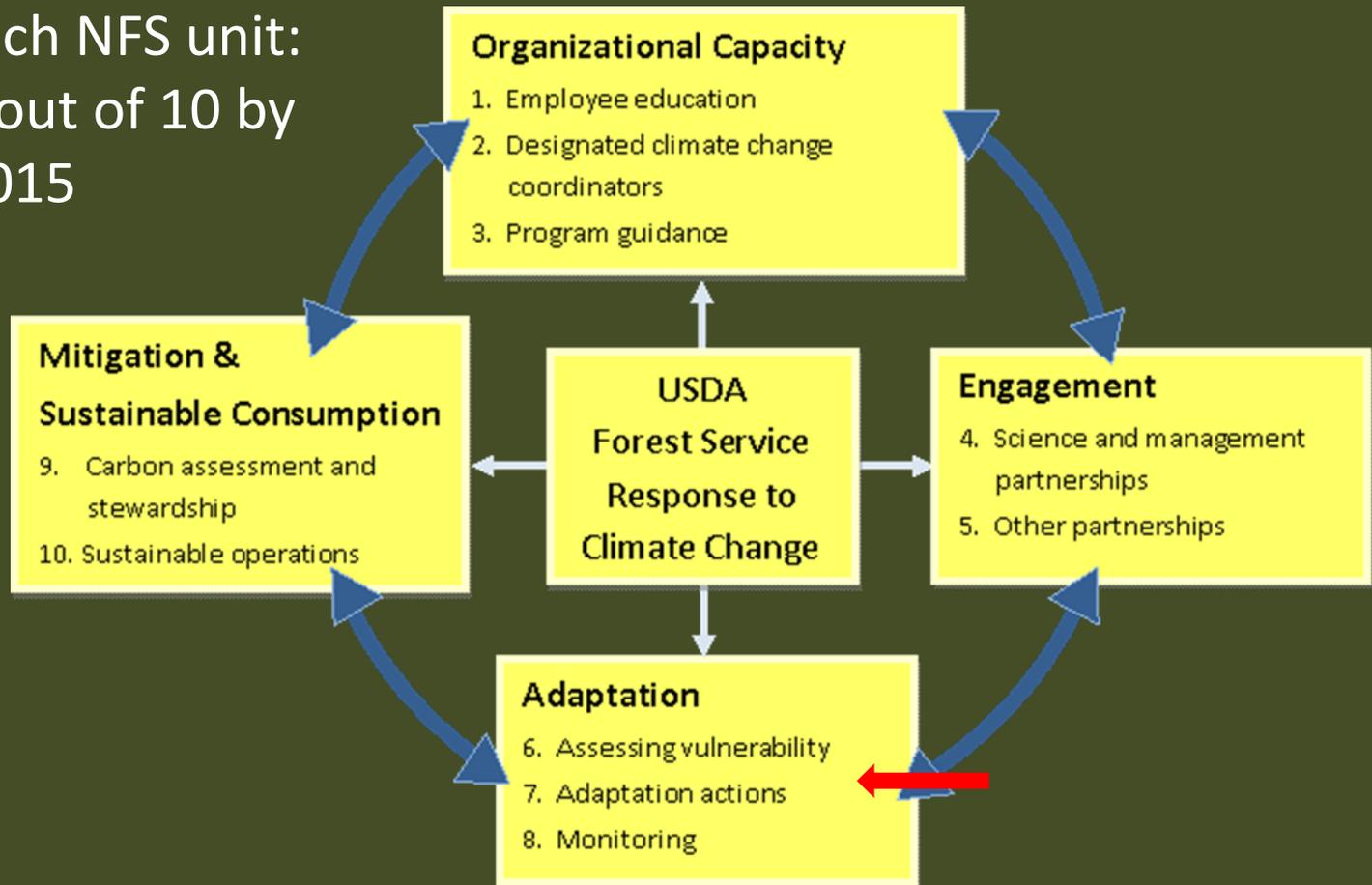
National Roadmap for Responding to Climate Change



Changing Forests... Enduring values

Climate Change Performance Scorecard

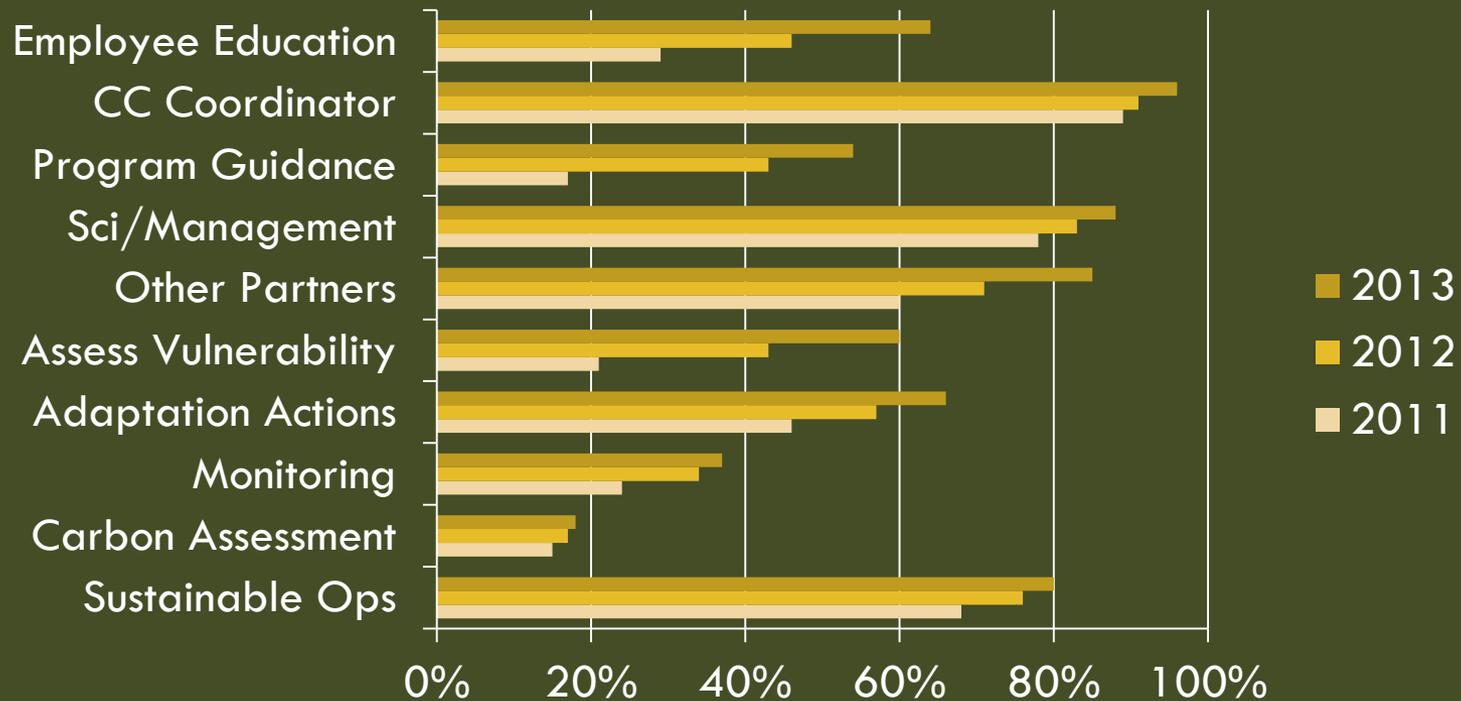
Goal for each NFS unit:
"Yes" to 7 out of 10 by
2015



Changing Forests... Enduring values

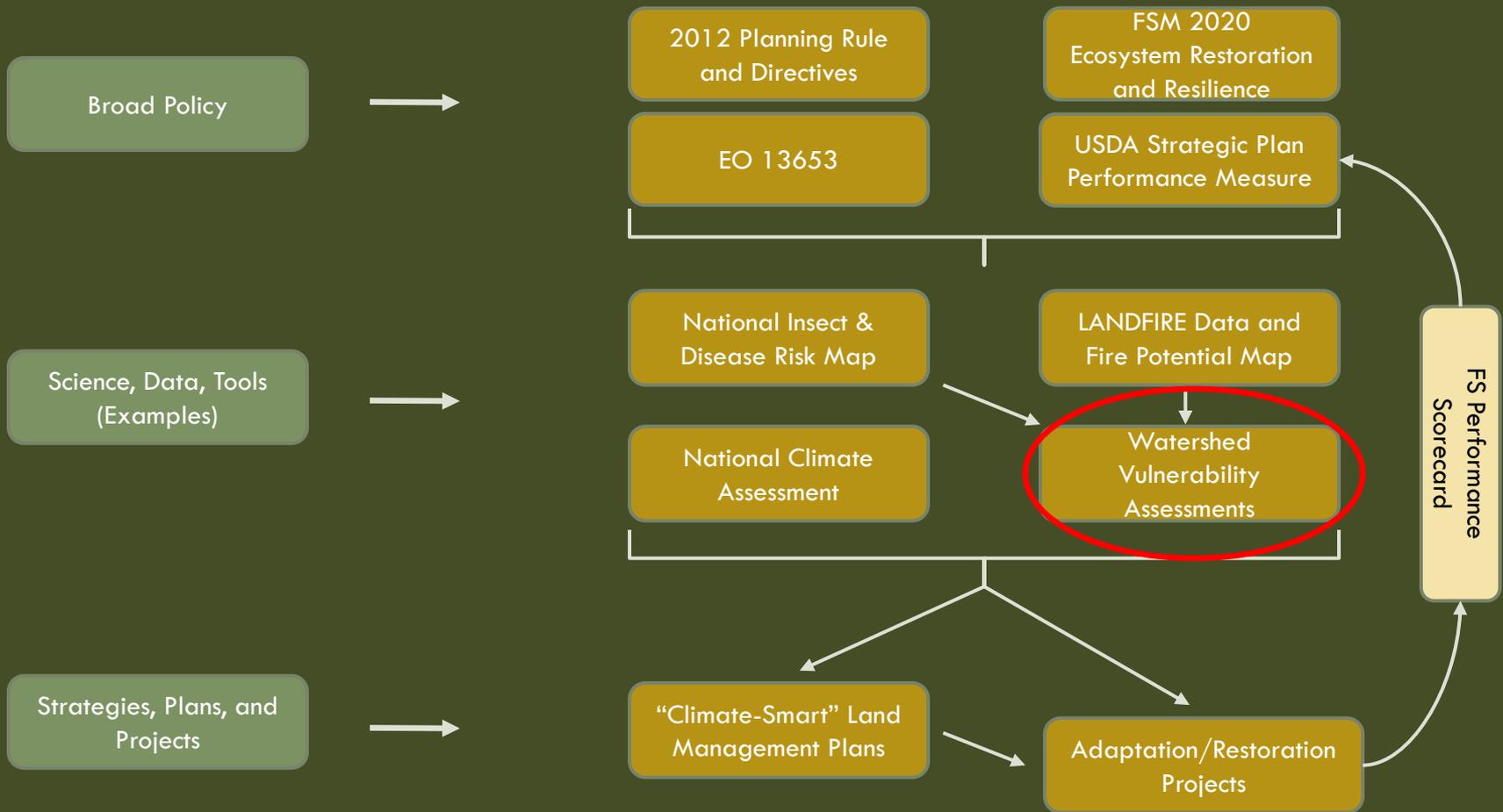
FY2013 Scorecard Assessment

Percent Yes by Element



Changing Forests... Enduring values

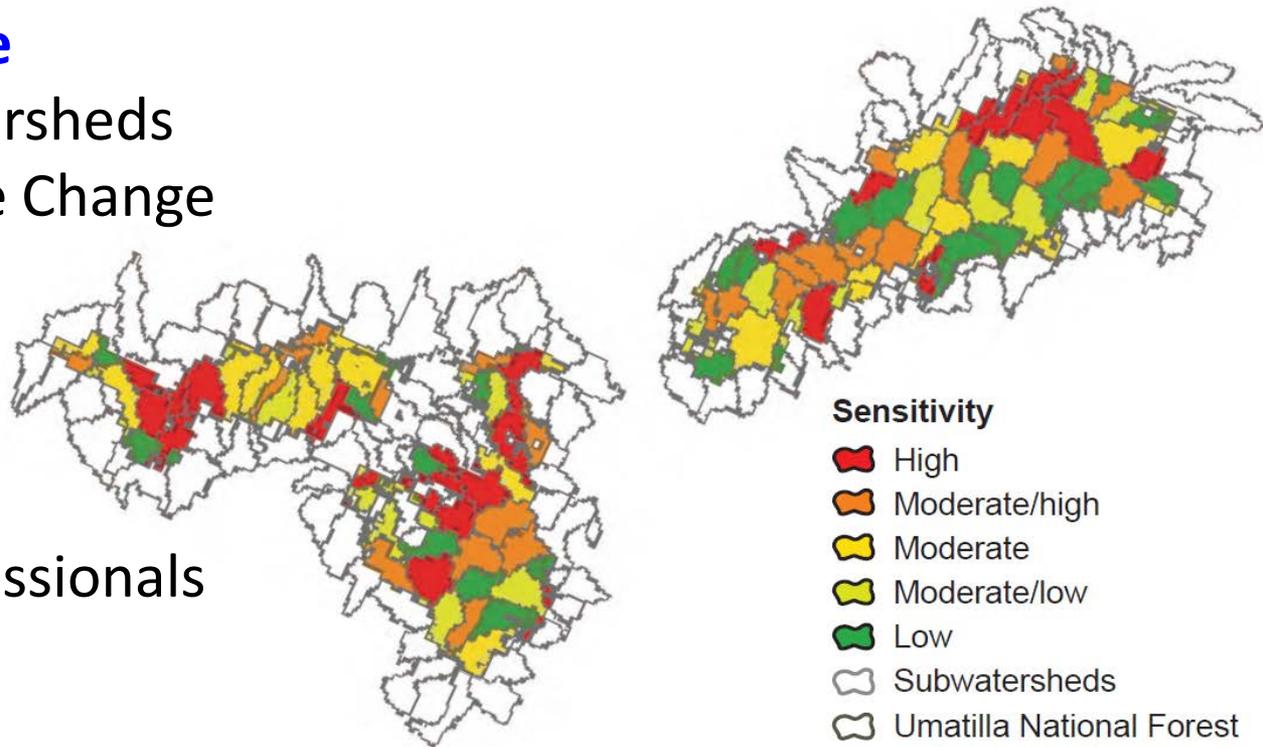
Integrating Adaptation into NFS Land and Resource Management



Changing Forests... Enduring values

The Objective and Approach

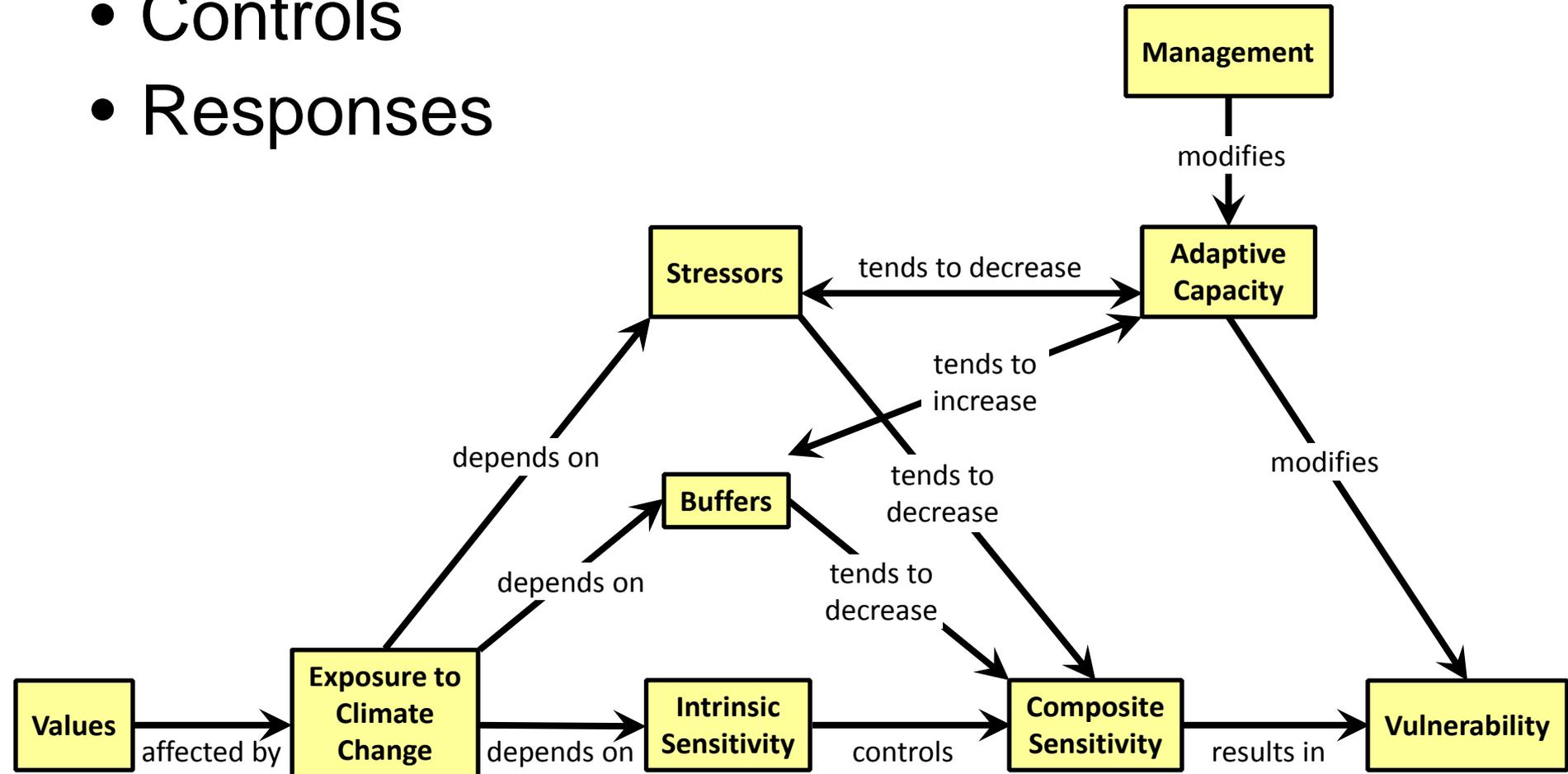
- Develop a Process to:
 - Illustrate the **Relative** Vulnerability of Watersheds to Impacts of Climate Change on Water Resources
- Using:
 - Existing Information
 - National Forest Professionals
 - A Forest-Research Partnership



Composite rating of watershed sensitivity for the Umatilla NF.
Factors used: groundwater dependence, watershed restoration Investment, roads, range condition, forest vegetation condition, aquatic habitat condition.

Assessing Watershed Vulnerability

- Interactions
- Controls
- Responses



Values \times **Exposure** \times **Sensitivity** = **Vulnerability**

Watershed Vulnerability Assessments Pilot National Forests





Forest Service Resources

- Climate Change Resource Center (CCRC)
<http://www.fs.fed.us/ccrc/>
- PNW-GTR-884. 2013. Assessing the Vulnerability of Watersheds to Climate Change: Results of National Forest Watershed Vulnerability Pilot Assessments.
http://www.fs.fed.us/pnw/pubs/pnw_gtr884.pdf