

**COMBINING GEOSPATIAL VULNERABILITY ASSESSMENT AND SCENARIO PLANNING
FOR CLIMATE ADAPTATION: A FIRE MANAGEMENT EXAMPLE (6D)**

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Scientists and land managers in the Southern Sierra Nevada are working together to re-evaluate fire management in a changing climate. Fire is a potent resource management tool and potential stressor because of its strong linkage to climate and direct and indirect effects on the environment and people. We set out to develop knowledge, process, and tools to describe the future in a useful way for planning, to identify what resources are vulnerable and where, and to help us prioritize management strategies across the landscape. The novel process involves three tools: (1) a geospatial vulnerability assessment that uses downscaled GCM output and analyzes vegetation stress related to climate and fire; (2) scenario-based planning that considers multiple futures, incorporates both ecological and socio-political uncertainties, and lets us think “outside the box” where models currently cannot go; and (3) an interactive planning exercise that integrates the two – “Making it Real” and giving us practice in adaptation planning. The combined ecological/socio-political scenarios have names like “Ecosystem Management”, “Water Wars Ignite”, and “Mega Fire Looms”. The integrative process has proven powerful to combine disparate information and actively engage participants in new ways of thinking while making the results relevant to on-the-ground management.

Key words: climate change, fire, management, scenario planning, vulnerability, adaptation