

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Using Climate Change Scenario Planning to Promote Resource Stewardship in the National Park Service

Discipline: Social Science
Type of Project: Education
Funding Agency: National Park Service
Other Partners/Cooperators: Colorado State University
Effective Dates: 9/15/2008- 9/15/2011
Funding Amount: \$20,000

Investigators and Agency Representative:

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Project Abstract:

Background

NPS has a goal of incorporating global climate change (GCC) into its analysis and planning framework. Scenario planning offers a process for developing a science-informed decision making framework in the face of an uncertain future. A scenario is an account of a plausible future that draws on information from the past and the present. Climate change scenario planning involves exploring qualitative as well as quantitative models in order to envision a range of future outcomes under a variety of different climate conditions, decisions, policies, or societal pathways. By envisioning alternative futures, scenarios can help NPS managers identify policies and actions that will be most effective across a range of potential futures or that promote desired outcomes, such as resource sustainability and ecosystem resilience. In this way, scenarios can be used to better understand and explore possible future situations that managers could face, especially in the context of climate change, where uncertainty is high and when controllability is low. The objective of this project is to develop scenario planning as an important tool to achieve this goal.

Statement of Work

A Training Workshop will be conducted with scientists, resource managers, planners, and communication specialists to build capabilities for using scenario thinking and planning to better understand and address climate change and its impacts on national park lands. Scenarios will be used to explore climate change dynamics and resource management implications in a prototype park unit. The park unit will be determined by an interdisciplinary team and will represent both natural and cultural resource issues. Possible units that will be considered for the prototype are: Channel Islands National Park off the west coast of California; Dry Tortugas National Park in Key West, Florida; Kenai Fjords National Park in southwestern Alaska, or Parashant National Monument in northwestern Arizona.

Training in Scenario Planning is most powerful when linked to real issues as case studies and discussed by interdisciplinary teams. The PI will work with the NPS Climate Change Coordinator and a Core Team of science and resource specialists from the NPS to develop and implement a workshop that will prototype how to use scenario planning to develop strategies for coping with and adapting to climate change. The workshop will take place at or near the prototype park unit and will accommodate up to 30 participants.

The training will include the relationship of scenario planning to other natural resource management tools. These include approaches to characterizing, or articulating resources to a degree that managers and stakeholders can identify, and work with key aspects of the resource, be it a species assemblage or process such as fire. This will be linked to forming and communicating "boundaries" for participants

to consider what is plausible, yet go beyond the limiting "what is expected." Other concepts such as resiliency and sustainability require articulation of the resource, as does the identification of a "desired future condition" which, while based primarily on our current level of certainty, acts as a foundation for understanding the range of departure for scenario development.

NPS resource specialists and managers also contribute to the identification or related strategies related to scenarios. An approach to identifying and developing strategies for resource stewardship is equally undeveloped in the NPS. One of the key strategies coupled with scenario planning is adaptive management. Done correctly, while we may identify a desirable outcome through scenario planning, the question of how we will achieve that outcome may not be obvious or otherwise based on evidence. Once the desirable scenario is selected, we want to develop a testable hypothesis to understand whether our management action achieved the climate change adaptation that was sought.

Lastly, scenario planning is often used as a tool to bring groups of various technical backgrounds together. NPS approaches to stakeholder involvement through NEPA requirements and more forward thinking approaches to civic engagement should be incorporated into the context of the workshop.

We need to use the PIs skills and NPS expertise to not just put on a workshop but to enhance workshop design and establish a template for use by other NPS parks. We want to use scenario planning to address climate change in resource stewardship strategies, and then incorporate an adaptive management framework for monitoring the success of that strategy.

The PI can contribute strategic planning experience to developing the right structure for information collection and development of the info available into actual scenarios. She will also facilitate communication with stakeholders, helping to elicit their expertise and insight.

Workplan

- CSU and NPS assemble scenario planning and Scenario Planning workshop case studies and background papers
- CSU-PI assembles techniques and case studies for developing complex analyses in group settings
- CSU-PI, in collaboration with BRMD Human Dimensions Program Lead assembles appropriate info for engaging stakeholders
- NPS provides planning and analysis frameworks
- CSU and NPS design workshop
- CSU and NPS summarize information for future workshops
- CSU-PI and Leigh Welling lead workshop
- CSU-PI summarizes lessons learned from workshop in a final report

Outcomes with Completion Dates:

Due Date for Final Report and/or other Products: September 15, 2010

Keywords: Climate change, workshops, scenario planning, NPS-Natural Resource Program Center, Colorado State University