Climate Change Response Program Adaptation Brief

National Park Service
U.S. Department of the Interior

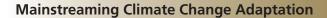
Natural Resource Stewardship and Science Climate Change Response Program



Adapting to Change

Background

Ongoing and future climate change will likely affect all aspects of national park management, including natural and cultural resource protection, operations and infrastructure, and visitor use and experience. In this context, adaptation is an adjustment in natural or human systems that moderates harm or exploits beneficial opportunities in response to climate change. Positioning the National Park Service (NPS) to adapt to rapid directional change and climate uncertainties is a central goal for the Climate Change Response Program. The ability of NPS managers to support and implement effective adaptation will influence the long-term structure, function, and viability of resources and infrastructure within parks. Adaptation to ongoing climate change often requires revising existing strategies to meet traditional goals and will increasingly require revising goals and developing novel strategies as conditions shift beyond the historical range of variability. Additionally, coping with large-scale effects associated with climate change will require collaborative responses across landscapes and jurisdictions. Applying the best-available science and committing to adaptive management are critical components of an effective response.



Several objectives guide the NPS in achieving adaptation goals. To determine and sustain priority adaptation responses, managers need access to robust scientific assessments, policy guidance, trained personnel, and strong partnerships. The NPS is fostering climate change adaptation as a routine part of doing business within parks and in work with our partners.

Resist Accommodate Direct

Climate Change Adaptation Strategies

Climate change adaptation is about managing change and includes a spectrum of strategies (adapted from *Fisichelli et al. 2016*). Appropriate options will vary over time, across space, and among resources.

Status and Next Steps

The widespread nature of climate change amplifies ongoing resource impacts such as habitat fragmentation, water scarcity, pollution, invasive species, etc. Simultaneously, uncertainties regarding future conditions challenge efforts to determine appropriate adaptation actions. Collaboration across landscapes, partnerships, development of new tools, and planning for change will help to address these challenges.



Haleakalā and Hawai'i Volcanoes National Parks are collaborating with local scientists and neighbors to resist climate change impacts by establishing satellite populations of high-elevation endangered plant species within their modeled ecological ranges; NPS photo.

Activities underway in the NPS include:

- Providing analysis, synthesis, and translation of managementrelevant science to support park planning at all levels (e.g., http://science.nature.nps.gov/climatechange/).
- Developing guidance for including climate change in planning and decision documents, including Foundation Documents and Resource Stewardship Strategies.
- Analysis of park resource and facility issues associated with climate change that may require policy guidance and/or new approaches to frame management goals and desired outcomes in the context of a rapidly changing environment.
- Advancing adaptation guidance, decision-support tools, and examples to support the NPS response to climate change (e.g., http://www.nps.gov/subjects/climatechange/adaptationresources.htm).
- Guiding and developing vulnerability assessments for parks, as well as collaborating with other agencies in vulnerability assessments and strategies for adaptation.

More Information

Cat Hawkins Hoffman

Acting Chief ph: (970) 225-3

Climate Change Response Program email: Cat_Hawkins_Hoffman@nps.gov

Nicholas_Fisichelli@nps.gov

Nicholas Fisichelli, Ph.D.

ogist ph: (970) 225-3578

Climate Change Response Program email: Gregor Schuurman, Ph.D.

cologist ph: (970) 267-7211

Climate Change Response Program email: Gregor_Schuurman@nps.gov

http://www.nps.gov/climatechange

EXPERIENCE YOUR AMERICA™ Feb 2016