



NEPA - Proposal Development

Preparers

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Background

The proposal development stage is when a project's purpose and need is developed and examined for consistency with pertinent laws. This is when it may be appropriate to consider how a changing climate may impact the ability of a project to meet objectives and whether proposed actions may help a forest adapt to climate change. Proposal development is also the appropriate time to consider whether carbon sequestration could be a complementary objective for a particular proposal, whether the project will contribute to significant greenhouse gas emissions, and how the effects of climate change in conjunction with project effects will be analyzed for area resources.

Purpose and Need

Projects are usually developed to respond to a specific need. Climate change impacts often influence conditions on the ground that merit recognition as a potential need. For example, climate change has been widely associated with exacerbating the risk of wildfire and the identified need for a project may be to reduce the risk of wildfire. The other part of the Purpose and Need is the purpose of the project. Normally the purpose for the project derives from a response to legal requirements or to achieve the desired conditions or objectives of the land management plan. For example, if the need is to reduce wildfire risk, the purpose is to modify the conditions on the ground to reduce that risk.

A clear purpose and need section is critical to developing proposals that will respond to the identified need and achieve the identified purpose as the climate changes. For example, vegetation management proposals may consider which tree species are likely to do well under potential future climates. Aquatic organism passage proposals may consider timing and volume of stream flows using the best available estimates of future hydrologic changes under a changing climate. Other proposals may examine the interaction between the effects of climate change and other stressors (e.g., insects, disease, invasive species) in order to develop purpose and need statements and proposed actions that include measures to limit these effects.

At this stage in the process, it is helpful to become familiar with local impacts of climate change on area resources. [Climate change assessments](#) provide a broad overview of regional and national

trends and projections and can be a good first step if more local information is not available. [The National Climate Assessment](#) reports on observed changes in the nation, the current status of the climate, and anticipated trends for the future. The 2010 Resources Planning Act (RPA) Assessment, [Future of America's Forests and Rangelands: Forest Service 2010 Resources Planning Act Assessment](#), reports on alternative future scenarios to analyze the effects of human and environmental influences on our forests and rangelands, including population growth, domestic and global economic growth, land use change, and climate change. Regional and forest-level vulnerability and impact assessments, when available, can provide more locally relevant information on the effects of climate change on key resources of management interest. Vulnerability assessments have been developed by the Forest Service and other natural resource management organizations and agencies. See the recommended reading section for a list of vulnerability assessments.

Monitoring data can also be used to detect conditions and trends related to climate change. Such conditions and trends provide important fundamental information for designing project purpose and need statements, proposals, and alternatives.

Proposals may meet the Agency's mission while also enhancing the resilience or adaptive capacity of resources to the potential impacts of climate change. Climate change mitigation or adaptation could be an objective or co-benefit of a particular proposal. For example, projects intended to restore the health, resilience, and productivity of forested ecosystems will also likely improve the capability of forests or landscapes to withstand climate change-related stresses, but it can be helpful to identify those aspects of a proposal that will specifically help forests adapt to climate change (Millar et al. 2007). Tools are also available to assist with identifying appropriate climate change adaptation strategies. See the tools section below for tools designed specifically to assist with incorporating climate change considerations into natural resource management planning and projects.

The proposal development stage is also an appropriate time to plan how impacts of climate change and other stressors on project area resources will be analyzed. Becoming familiar with the current and projected climate change impacts on the project area will help in identification of which resources are most likely to be affected.

Examples of projects that address climate change in purpose and need statement:

- [Deerfield Wind Project, Updated Information, Application for a Land Use Authorization to Construct and Operate a Wind Energy Facility, Special Use Authorization Permit, Green Mountain National Forest, Bennington County, VT \(pages 6-11\)](#)

Consistency with Plans and Laws

Many long-term planning documents, such as land and resource management plans, were developed before climate change became the highly visible issue it is today. Under the [2012 Planning Rule](#), future plan revisions will consider climate change influences on local natural resource management and the ecological, social, and economic environments, but many existing plans and planning records generally lack specific information related to climate change. Even so, many principles of adapting to climate change are consistent with restoring ecosystem health and reducing stressors and thus are in alignment with current plan goals and objectives.

Currently, there are no federal statutes that explicitly require or prohibit the consideration of climate change in federal land management projects. However, some states may have laws or programs

may require reduction, regulation, or monitoring of GHG emissions.

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www.fs.usda.gov/ccrc/topics/nepa

Recommended Reading

Joyce, L.A.; Janowiak, M.K. 2011. [Climate Change Assessments](#). U.S. Department of Agriculture, Forest Service, Climate Change Resource Center.

Melillo, J.M.; Richmond, T.C.; Yohe, G.W., eds. 2014. [Climate change impacts in the United States: The Third National Climate Assessment](#). U.S. Global Change Research Program, 841 pp.

Millar, C.I.; Stephenson, N.L.; Stephens, S.L. 2007. Climate change and forests of the future: managing in the face of uncertainty. *Ecological Applications*. 17: 2145-2151.

Stein, B.A.; Glick, P.; Edelson, N.; Staudt, A., eds. 2014. [Climate-smart conservation: Putting adaptation principles into practice](#). National Wildlife Federation, Washington, D.C.

U.S. Department of Agriculture, Forest Service. 2012. [Future of America's forest and rangelands: Forest Service 2010 Resources Planning Act Assessment](#). Gen. Tech. Rep. WO-87. Washington, DC. 198 p.

Vose, J.M.; Peterson, D.L.; Patel-Weynand, T. 2012. [Effects of climatic variability and change on forest ecosystems: a comprehensive science synthesis for the U.S.](#) Gen. Tech. Rep. PNW-GTR-870. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 265 p.

Example Regional and Forest-level Vulnerability and Impact Assessments

Northeast and Midwest

- Ecosystem Vulnerability Assessment and Synthesis: A Report from the Climate Change Response Framework Project in Northern Wisconsin
- Michigan Forest Ecosystem Vulnerability Assessment and Synthesis
- Minnesota Forest Ecosystem Vulnerability Assessment and Synthesis
- Central Hardwoods Ecosystem Vulnerability Assessment and Synthesis
- Central Appalachians Ecosystem Vulnerability Assessment and Synthesis
- Changing Climate, Changing Forests: The Impacts of Climate Change on Forests of the Northeastern United States and Canada

Southeast

- Southeast Regional Climate Hub Assessment of Climate Change Vulnerability and Adaptation and Mitigation Strategies
- Gulf Coast Vulnerability Assessment

Northwest

- Tongass National Forest Climate Change Vulnerability Assessment
- Climate change Vulnerability and Adaptation in the North Cascades Region, Washington
- Adapting to Climate change at Olympic National Forest and Olympic National Park

Rocky Mountain Region

- Climate Change on the Shoshone National Forest, Wyoming
- Climate Change in Grasslands, Shrublands, and Deserts of the Interior American West: A Review and Needs Assessment

Southwest

- A Climate Change Vulnerability Assessment for Focal Resources of the Sierra Nevada
- Review and Recommendation for Climate Change Vulnerability Assessment Approaches with Examples from the Southwest

Tools

Forest Adaptation Resources: Climate Change Tools and Approaches for Land Managers provides a menu of adaptation strategies and approaches. It also includes a workbook process to help incorporate climate change considerations into forest management planning and to assist land managers in developing project-level and landscape-level climate adaptation tactics for forest ecosystems. An [online version](#) of the adaptation workbook is also available.

TACCIMO (Template for Assessing Climate Change Impacts and Management Options) is a web-based tool designed to incorporate climate change considerations into forest planning and management. It compiles climate change projections, literature-based impacts and management options, and Forest Service land and resource management plans in an online database. It then synthesizes these inputs based on user-defined criteria into customized reports.

Climate project screening tool: an aid for climate change adaptation lists projected climate trends for the target region and questions to be considered when designing projects in different resource areas. The objective is to explore options for ameliorating the effects of climate change on resource management projects and resources of concern.

Related Topics

Uso del análisis del inventario forestal para detectar migraciones de árboles en respuesta al cambio climático

NEPA - Decision Documents and Implementation

NEPA - Environmental Analysis

NEPA - Introduction to Incorporating Climate Change

Vegetation Models for Climate Change Impacts

Predicting Changes in Forest Composition and Dynamics

Tree Habitat Shifts

Detecting Tree Migration with Forest Inventory Analysis

Species Distribution and Climate Change

Climate Change Impact Assessments

Climate Change Assessments

Climate Change Vulnerability Assessments

Climate Change in Natural Resource Assessments

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