



REASONABLY FORESEEABLE FUTURES

Climate Change Adaptation and the National Environmental Policy Act

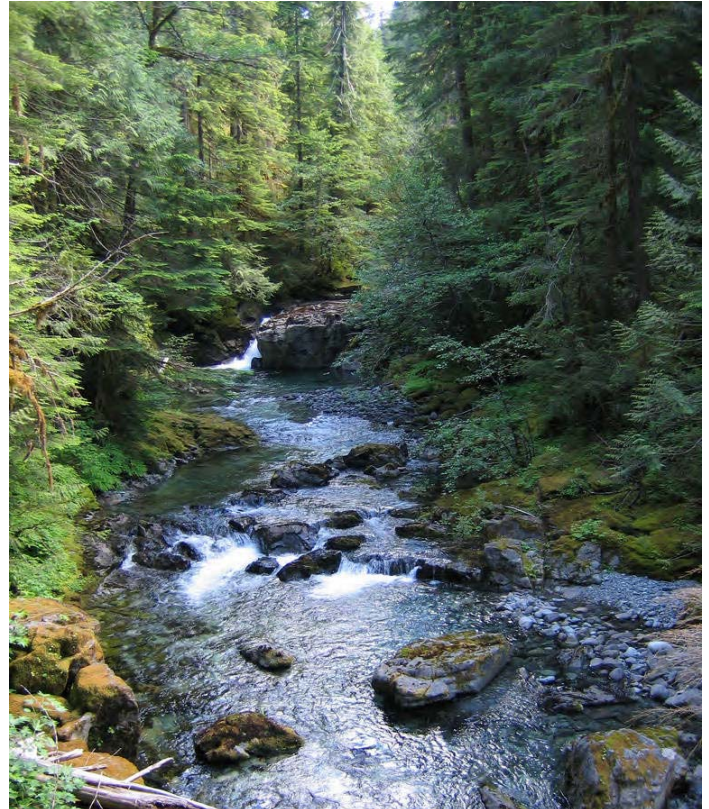
Climate change is one of the most important issues facing environmental managers and planners, and promises to remain so for the foreseeable future. The National Environmental Policy Act (NEPA) is the most significant piece of federal legislation guiding environmental analysis and decision-making, and provides a strong foundation for incorporation of climate change into project and programmatic considerations through its existing framework. It is increasingly critical for agencies to thoughtfully and thoroughly consider climate change, from both an emissions and adaptation standpoint, as part of NEPA analysis.

Evaluating Incorporation of Climate Change

The Council on Environmental Quality released draft guidance on incorporating climate change into NEPA, particularly Environmental Impact Statements (EISs), in February 2010. Defenders of Wildlife analyzed 154 EISs released between July 2011 and April 2012 to determine how well agencies had incorporated the draft guidance's climate adaptation recommendations. We found that even the best-performing EISs had only a limited consideration of climate change, failed to make a full comparison between the various alternatives, or used short and qualitative statements rather than full analysis based on the best available science.

Based on our analysis, we assigned each EIS to one of six performance categories, as shown in the table below.¹

Performance	EISs	Percent
Moderate to good incorporation of climate change into affected environment & alternatives comparison	15	10%
Limited consideration of climate impacts to project and affected environment	26	17%
Acknowledge potential impacts to project, but not to affected environment	8	5%
Climate change discussion in EIS refers only to emissions, not to impacts	38	25%
Mention climate change briefly but no emissions or impacts analysis	48	31%
No mention of climate change in the EIS	19	12%



Opal Creek Wilderness, Oregon (FWS)

The level of incorporation of climate change varied widely, but no EIS comprehensively evaluated climate change impacts across the full range of resources affected, for all of the alternatives presented. Land, coastal and water management agencies accounted for the majority of the final EISs that were released during the period of our analysis. This category also tended to represent the better-performing analyses, despite the fact that draft guidance excluded federal natural resource agencies. Natural resource management decisions are some of the most sensitive and vulnerable to climate change impacts, and natural resources agencies need to be provided direction and support for understanding and planning for these impacts.

¹ For a more detailed chart of our EIS analysis please see the full report here: <http://www.defenders.org/publication/reasonably-foreseeable-futures-climate-change-adaptation-and-national-environmental>

Recommendations

Given the rapidly accelerating pace of climate change and the wide-ranging impacts it will have on many aspects of the human environment, climate change likely warrants emphasis in nearly all federal actions (with few exceptions, like some temporary actions). Agencies clearly have a long way to go in order to effectively incorporate climate change into their NEPA analyses. There are currently three major barriers to agencies performing robust NEPA-climate change impacts analysis:

1. The guidance remains in draft form more than three years after its release
2. Uncertainty about climate change and its impacts prevents agencies from conducting a full analysis. A federal climate change data and information center would do much to rectify this information gap.
3. The draft guidance lacks detail about how to conduct a robust analysis of the interaction between a proposed action, various alternatives, climate change, and other sources of cumulative impacts

Below are Defenders' recommendations for improving EIS incorporation and analysis of climate change.

Purpose and Need: Consideration of climate factors should begin with the purpose and need, which should be examined to determine if they are robust in a changing climate. For instance, a project designed to protect a coastal community from storm surge will not be responding to the right "need" if it only accounts for historic sea and surge levels.

Preparers, Timeframe and Scope: The EIS preparation team should include individuals with expertise in climate change and its incorporation into analysis and planning. Climate considerations should also inform the timeframe and geographic scope of analysis, which may need to be expanded to account for range shifts and other landscape-level effects.

Significance of Effects: Significance of a proposed action's effects must be considered in the context of climate change. Seemingly minor effects may in fact be made significant by climate change, such as water withdrawals compounding scarcity from climate change-induced drought.

Alternatives: When developing alternatives, an agency should consider whether climate change may affect the ability of the alternative to meet the purpose and need, such as by assessing the vulnerability of each alternative to relevant climate change impacts. Climate models can provide a robust comparison of the alternatives under various climate scenarios, and inform an agency's selection decision. Where possible, agencies should include actions or design features that reduce the likelihood or severity of climate change impacts.

Affected Environment: Because this section is the basis for comparison of consequences it is particularly critical that agencies consider the full range of elements that could face effects from the project, and integrate climate change threats into the discussion of each element.

Environmental Consequences: In the analysis of each alternative's impacts on the affected environment, agencies should discuss the effects of climate change to each environmental resource, the extent to which each alternative's impacts will exacerbate climate change impacts, and the interaction with other threats, stressors, and cumulative impacts.

Mitigation and Monitoring: In addition to mitigation via greenhouse gas reduction, the EIS should discuss opportunities to mitigate other potential climate change impacts resulting from the project, such as: strategies to reduce consequences of exposure to climate changes; to restore the species, habitat or ecosystem to be more resilient to climate factors; or protect the species, habitat or ecosystem where it may be less affected by climate change.

Given the profound impacts of climate change on wildlife and ecosystems, as well as to communities and infrastructure, it is critical that analysis of these impacts be mainstreamed into all levels of planning and analysis. Agencies implementing NEPA need to better integrate the impacts of climate change into their NEPA analyses in order to make more robust planning decisions and ensure that investments of federal resources are resilient to climate change.