

A Brief Guide to Assessing Ecosystem Services for Forest Plan Revision

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Why is it important to address ecosystem services in assessments?

An ecosystem services approach serves the Forest Service mission by helping us articulate the goods and services that national forests and grasslands provide to the American people. The 2012 Planning Rule sets forth process and content requirements to guide the development, amendment, and revision of land management plans to maintain and restore National Forest System lands and aquatic ecosystems while providing for ecosystem services and multiple uses. Specifically,

§ 219.1 Purpose and applicability . . . (c) Plans will guide management of NFS lands so that they . . . ; and have the capacity to provide people and communities with ecosystem services and multiple uses that provide a range of social, economic, and ecological benefits for the present and into the future . . .

§ 219.6 Assessment . . . (b) In the assessment for plan development or revision, the responsible official shall identify and evaluate existing information relevant to the plan area for: . . . (7) Benefits people obtain from the NFS planning area (ecosystem services) . . .

Assessing ecosystem services begins by asking “How do people benefit from the forest?”

Ecosystem services are defined as the benefits people get from nature. When answering the question above, we traditionally think of the usual outputs that people hear about and observe such as timber, grazing, recreation, and minerals.

However, there are other services people don't think about as much that are at risk of getting left out of discussions because these other services don't have prices (people do not pay for them) or they are difficult to value. As a result, people are not used to talking about other types of services or don't understand the full importance of those services in their lives, communities, or broader regions.

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To help address less traditional benefits and provide a more complete answer to the question above, we offer examples of different types of services that national forests provide in four categories of benefits that are noted in the Planning Rule:

- Provisioning Services (such as fiber, food, water, minerals, or energy)
- Regulating Services (such as carbon sequestration, erosion prevention, insects and diseases control, or stream flow control)
- Support Services (such as nutrient and organic carbon cycling)
- Cultural Services (such as recreation opportunities and amenities, cultural sites and support, or solitude)

The examples listed for each category are just a sample of benefits that could be derived from national forests; it is important that you consider other nontraditional benefits there might be for your national forest. There is no need to try and assign each benefit you identify to a specific category of services because they may overlap.² These categories are designed to stimulate discussion and trigger ideas about the range of benefits from national forests. The outcome or result from your initial discussions about benefits may result in a long list of potential goods and services, so it becomes necessary to narrow down the list to those that are “key” benefits or ecosystem services. Planning teams are free to use ecosystem service categories to help organize summaries of ecosystem services in their assessment write ups, but it is not required.

How do we identify key ecosystem services (key benefits)?

Key ecosystem services are those that are (1) important outside the plan area itself, in areas of influence or the broader landscape, and (2) likely to be influenced by the management plan (FSH 1909.12, ch. 10, sec. 13.12). The intent of this handbook language is to focus the assessment on key ecosystem services that can be affected by planning, rather than trying to evaluate information about all ecosystem services that may be present in the plan area.

To help determine what ecosystem services are important, consider the following:

- Who benefits and how? What is the size and location of beneficiary populations? What is the level of satisfaction with the service (or, what is the quantity and quality of the service)?
- What is the future trend in who benefits? Will demand increase or decrease for the good or service in the future?

² Goods or services traditionally thought of as multiple uses, including the list of example multiple uses provided in the Multiple Use-Sustained Yield Act are included within ecosystem services (e.g., grazing or forage is a provisioning service). Discussions of ecosystem services therefore encompass traditional views of multiple uses.

- How are other land owners, outside or in addition to the Forest Service, contributing to the service?
- Is the good or service a critical factor in sustaining benefits broadly appreciated?

To help determine which ecosystem services are affected by the national forest, contributed to by the national forest, and linked to the plan in a measurable way, consider these questions:

- What are current levels and quality of goods or services flowing from your national forest?
- What resources or resource conditions or trends on the national forest play a key role the production or availability of the good or service?
- What resources or resource conditions on lands outside the national forest contribute to the availability or production of the service? What is the condition and trend of those resources and conditions? How do these conditions and trends complement the ecosystem services on the national forest?
- What are the risks or stressors that could affect the availability or production of the ecosystem service now or in the future?

What should the assessment of ecosystem services look like?

The assessment of ecosystem services should reflect consideration of a broader scope of ecosystem services as well as available information and reports, but it should primarily focus on summarizing information about key ecosystem services. It may also identify information gaps when there is uncertainty about the degree to which ecosystem services are important or relevant. Planning teams have flexibility in how ecosystem service information is organized and presented in the assessment. In many cases, it will be possible to refer to, or even include ecosystem service summaries in other sections of the assessment without having to repeat information in a stand-alone ecosystem services section.

The assessment of ecosystem services should summarize available information for a preliminary list of key ecosystem services, recognizing that the list of key services may be refined in subsequent planning steps. You will not be expected or able to provide a response to all considerations in the assessment because you will be relying on currently available information, reports, and feedback from specialists on the planning team.

What do I do about ecosystem service values?

There is no requirement that values (in dollars or other quantitative measures) be assigned to ecosystem services in assessments. However, you should consider presenting readily available information about the values of ecosystem

services if it helps when characterizing the importance of services. When discussing values, try to describe the values for a national forest's contribution to an ecosystem service, not simply the value for the ecosystem service as a whole. For example, if you discuss the total value of water supplies in an area or region, then you should attempt to discuss how much the national forest contributes to that supply and the incremental value of water contributed by the forest unit.

What other tools and advice could help me incorporate ecosystem services into planning?

An Ecosystem Service Assessment Process and Tool (Five Steps) is available to facilitate discussions with planning teams as well as the public, to help collect information to address the considerations outlined above. The 5 steps are an example of a process for identifying key ecosystem services, describing those ecosystem services (indicators, template tables), and organizing information in an assessment document, which planning teams may find helpful.

More information about the five step process is available at:

<http://www.fs.fed.us/emc/economics/applications.shtml>

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