Assessing Forest Goods and Services (Ecosystem Services) for the Assessment Phase of the Plan Revision Process

A 5-Step Process for Interdisciplinary Planning Teams

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Background: This tool is designed to help planning teams describe how people benefit from the forest, and how those benefits might change as a result of plan revision. This helps us comply with the new planning rule regarding **ecosystem services**.

The plan revision process consists of (1) assessment; (2) plan revision, including NEPA and the EIS; and (3) monitoring. This tool addresses the **ecosystem services** (**forest goods and services**) requirements in the assessment phase only, but can also serve as a bridge for considering **forest goods and services** in the next phases of planning. There are five steps here to guide planning teams through the process of assessing **forest goods and services**. However, we should note that planning teams and others can adopt other ways that best meet the needs of their forest for assessing these goods and services.
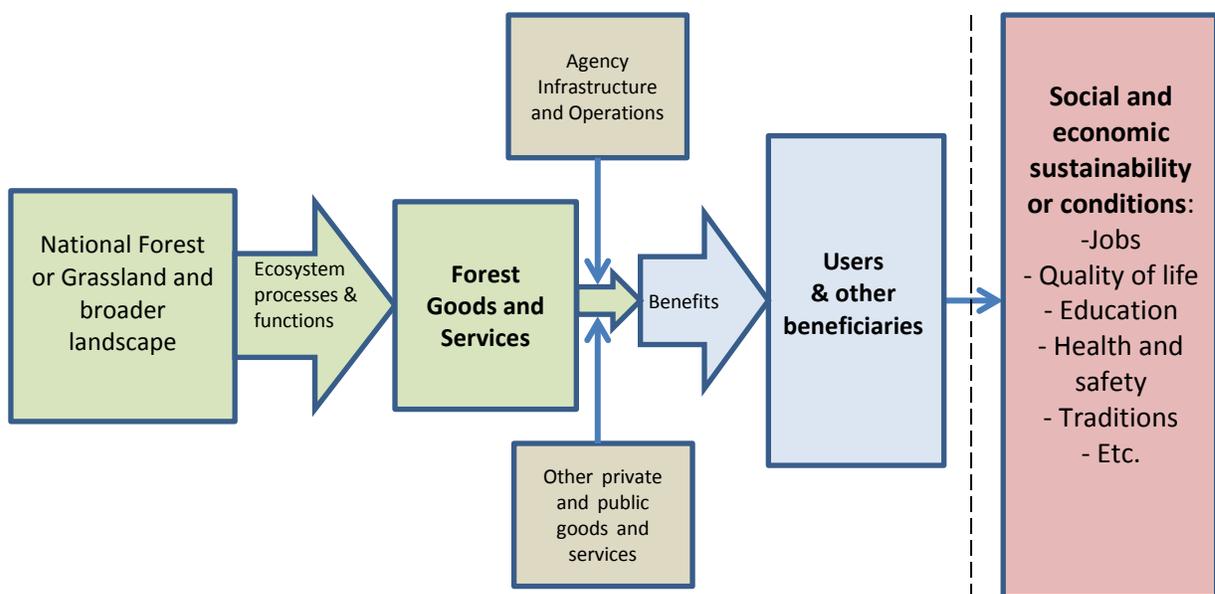

Figure 1. Relationship between Beneficiaries and Ecosystem Services (see supporting materials for examples and explanations)

Helpful Supporting Information: This document refers to accompanying material including a workbook, PowerPoint slides, and a more detailed training script to support this 5-step process. The supporting information can be obtained by contacting Forest Service staff: Chris Miller (chrismiller@fs.fed.us) or Henry Eichman (henryeichman@fs.fed.us).

Step 1. Establish a foundation for discussing how benefits are derived from forests and grasslands.

Objective: Use figure 1 to help understand how people benefit from forests or grasslands through **forest goods and services**. The figure introduces the terms **forest goods and services**, **ecosystem processes and functions**, **beneficiaries**, and **social, cultural, and economic conditions** as building blocks for describing how forests and grasslands provide benefits to people.

- **Forest goods and services** are those forest goods and services that more directly benefit people (e.g., provisioning or cultural services).

- **Ecosystem processes and functions** are forest goods and services that help regulate, support, or sustain the delivery of forest goods and services (e.g., support or regulating services).

This tool encourages us to identify combinations of **forest goods and services** and **beneficiaries** (as well as supporting **ecosystem processes and functions**), as "packages" for describing forest or grassland **benefits**. **Benefits** can then be linked to impacts on social, cultural, and economic conditions.

Facilitation and discussion: Ideally, a full team meeting at the beginning of assessment with an ecosystem services lead facilitating discussions.

Leading questions for team members and specialists (use figure 1 to explain) include:

- Why is your resource area important to people?

- Who cares about or interacts with your resource?

- Does your resource area support or sustain other goods and services?

Helpful note: Teams should not feel compelled to describe or fill-in all of the attributes in figure 1 for each benefit. Instead, identify a **forest good or service** in combination with a **beneficiary**, and one or more **social, cultural, and economic conditions**, recognizing that in some cases it may be easier to describe **ecosystem processes or functions**. Use the figure for thinking about how the various boxes provide opportunities for specialists to tell the story of how their resource areas and programs contribute to benefits. Use figure 1 to facilitate (not constrain) discussions and assessments of benefits.

Supporting materials: See supporting script for Step 1 and PowerPoint, including examples of figure 1 applications. Contact chrismiller@fs.fed.us or henryeichman@fs.fed.us for supporting materials.

Step 2. Identify a preliminary list of beneficiaries and associated forest goods and services.

Objective: For each resource area, develop a preliminary list of potential **beneficiaries** and associated **forest goods and services**. Also, consider the **social, cultural, and economic conditions** to which those beneficiaries are most directly connected. Develop the linkages between **ecosystem processes and functions** and the delivery of goods and services.

Facilitation and discussion: Convene ID team meeting to brainstorm a preliminary list of **beneficiaries**, considering input from the public and other stakeholders. Consider giving the starter list in the workbook as homework before the meeting so the team can highlight and/or add to the list. This exercise should clarify which **forest goods and services** should be included in the assessment. The process for identifying **key goods and services** for inclusion in the assessment is under Step 3.

Leading questions for step 2 include:

- Who interacts with or experiences, and therefore benefits from, the forest?

- What groups, individuals, users, communities, organizations, businesses, etc.?

- What forest resources, characteristics, or features do they benefit from?

Consider using the starter list of **beneficiaries** and **forest goods and services** included in the workbook, then modifying the list based on evidence in prior planning documents (such as AMSs) or input from specialists and/or the public.

This tool focuses on identifying **beneficiaries** and **forest goods and services**. However, figure 1 and the accompanying tables provide opportunities to identify **ecosystem processes and functions** and **infrastructure and operations**, that may contribute to, or complement production of, **forest goods and services**. Make sure every participant contributes at least one example.

Supporting materials: See accompanying script for Step 2 and workbook, including the starter list of **beneficiaries** and **forest goods and services**.

Step 3. Focus the list of forest goods and services and beneficiaries for assessment (i.e., "key" goods and services).

Objective: The goal of this step is to focus the assessment (and ultimately the planning process) by filtering down the initial list of goods and services to arrive at **key goods and services**. The two criteria are discussed below.

Facilitation and discussion: Specific team members (specialists) are connected to specific **ecosystem services** of the plan area. These **ecosystem services** can be provisioning or cultural services, or supporting or regulating services. Small groups of specialists sharing resource or program areas may work together to identify an initial list of **key goods and services**, then to modify the list based on evidence in prior planning documents or assessments, on new input from specialists or the public. A full ID team should then convene to combine lists. The responsible official may decide to engage the public to help identify the **key goods and services**.

Leading questions (the two criteria are from the Planning Rule):

*Which of the **forest goods and services** 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?

Supplemental questions:

*Determining the importance of the **forest good or service**:*

- Does the public use and enjoy this service? Have they expressed desire to sustain or increase this service?

- Has the public voiced concerns regarding decreased availability of the good or service?

- Do nearby communities rely on the good/service to support livelihoods, cultural practices, subsistence, or other factors that affect quality of life?

- Have published plans, policies, or other documents from government or nongovernmental sources specifically emphasized the importance of the good/service from the plan area?

- Are there few (or no) alternative ways to obtain this good or service in the nearby communities or broader landscape?

Determining if the good or service is influenced by the plan:

- Is it within the legal authority of the planning unit to influence the good or service?

- Does the Forest Service have the capability to influence the good or service?

- Could the plan reasonably establish plan components that would lead to policies, projects, or activities that would influence the good or service?

- Does the management of the plan area have the capability to influence the good or service?

Helpful note: This tool helps identify **key goods and services**; however, ID teams can judge how best to determine what is "key."

Supporting materials: See accompanying script for Step 2 and workbook; see examples of thought processes for identifying **key goods and services** in the script attachment.

Optional step: *Further group goods and services:* If the list of **key goods and services** is lengthy, items can be grouped based on similarity of how they could be influenced or affected by plan decisions. For example, recreational opportunities for backpacking, cross-country skiing, and hiking may all be similarly affected by plan decisions, and hence could be grouped.

Step 4. Identify available information for characterizing key forest goods, services, and beneficiaries

Objective: Identify available information for describing or measuring **key goods and services**, **ecosystem processes and functions**, their **beneficiaries**, and relationship to **social, cultural, and economic conditions**.

Facilitation and discussion: Team meetings or individual specialists. Consultation with "human dimension" specialists can be helpful, particularly for information about **beneficiaries** and their connection to **social, cultural, and economic conditions**.

Leading questions for identifying information and indicator needs:

- What levels of goods or services is the forest or grassland providing?

- What levels of goods and services does the public rely on, need, or desire?

- What ecosystem processes or functions support the production of these goods and services?

- What data and indicators can you use to quantify changes in the availability and needs for forest goods and services?

- Can data and indicators (spatial/GIS or non-spatial) help you describe:

  - Goods/services and beneficiaries at the appropriate geographic scale?

  - Current conditions, trends, and projections over time?

  - Key ecosystem processes or functions, drivers or stressors affecting demand for, or availability of goods and services?

- Are indicators sensitive to changes in plan components?

- What additional information is needed that is not already provided in other resource or program sections of the assessment?

- Are there gaps in available information for characterizing key ecosystem services?

Helpful note: Rely on readily available information, and take advantage of indicators and measures already being compiled in other resource, program, or multiple-use sections of the assessment. It might be difficult to capture all relevant sources of information, especially during a workshop. Having the workbook posted and available after the meeting can give team members a chance to add data later.

Supporting materials: See accompanying script for Step 2 and workbook, as well as starter list with examples of indicators.

Step 5. Summarize key Forest goods and services in the assessment document.

Objective: Use information from previous steps to prepare assessment documents that address the **key goods and services**. This includes describing each **key goods and services** (obtain from Step 4).

Facilitation and discussion: Individual specialist's draft portions of the assessment relevant to their resource areas. Or, the **ecosystem services** point person can coordinate inputs from other specialists, and compile the assessment chapter (see supporting script for more details).

There are considerable overlaps between the **forest goods and services** (**ecosystem services**) topic and the other assessment topics areas required by the Planning Rule. For example, the assessment section on multiple uses may cover many of the provisioning services; while the recreation section may capture substantial parts of cultural services. The task is to effectively integrate information about **key goods and services** collected from previous steps with other assessment topic areas in which they may connect or overlap. This can be done either by summarizing or referencing information from other sections of the assessment. The supporting script for Step 5 offers some options, including rationale for not creating a separate section on **forest goods and services** or **ecosystem processes and functions**. The intent is to fully embrace the **key goods and services** concept as the connective tissue of the assessment to better integrate resource areas and clarify how the public benefits from the forest or grassland. With this in mind, the following questions help structure, summarize, and integrate information about key **ecosystem services** provided by the plan area:

Leading questions for summarizing **forest goods and services** in the assessment documents:

- Describe how each key good or service is tied to the underlying resource area(s).
    - ♦ The current conditions and trends of these resources, and how the condition of, and stressors impacting those resources affects provision of goods and services.

- ♦ The influence of lands and conditions beyond the authority of the Forest Service that affects provision of goods and services.

- Describe the use of those key services (beneficiaries).

  - ♦ The current locations, conditions, and trends of uses and users and, how those conditions and trends in turn, affect the current or future provision of, and demand for services.

- Based on the above information, discuss the consistency or mismatch between uses/desires and availability of goods and services? For example, a declining resource base for a service may not support a rising user population (availability is inconsistent with needs).

Supporting materials: See accompanying script for Step 5 and completed workbook tables; refer back to "importance column" in the workbook.