

# Measuring and Monitoring Ecosystem Services



Protected habitat



## The business case

Weyerhaeuser believes that its management practices maintain or improve the ecosystem services associated with the forests it manages. Its timberlands business recently adopted a commitment to test this hypothesis, undertaking a process to categorize ecosystem services and designing metrics that can be tracked annually to measure progress against this commitment. Some of these ecosystem services already produce products and services with market value; some may provide opportunities for additional revenue or marketing potential; and some, although not measurable in dollars, will illustrate the range of values that accompany its managed forests. In all three cases, collecting and tracking this information should also help to translate these benefits into value for Weyerhaeuser customers, communities and other interested stakeholders.

## The issue

Weyerhaeuser Company, one of the world's largest forest products companies, was incorporated in 1900. Weyerhaeuser owns or manages 8.22 million hectares of forest land, and its 2011 sales were US\$ 6 billion. Weyerhaeuser employs 12,800 people in 11 countries and has corporate headquarters in Federal Way, Washington. The company grows and harvest trees, manufactures wood products and builds homes and residential developments. Weyerhaeuser also produces

cellulose fiber products (pulp) used in personal care products, newspapers and printing papers, and board used for packaging. Last year the company launched a new business, Weyerhaeuser Solutions, to leverage expertise to help clients with innovative forest solutions, including alternative energy resources, biomass feedstock, renewable forest products and ecosystem services. In 2010, Weyerhaeuser revised its company vision to strengthen its connection with the three pillars of sustainability: performance, people, planet. As part of this process, each Weyerhaeuser business aligned its targets with these three pillars. One of the stated targets is a business goal to maintain or enhance the ecosystem services provided by timberlands.

## The response

In 2011, Weyerhaeuser convened a team representing a cross section of Weyerhaeuser scientists, operational managers and staff, to determine a plan to measure and report against a set of ecosystem service metrics. The team used the WBCSD Ecosystem Services Review (ESR) framework adopted from the Millennium Ecosystem Assessment (MA) terminology. Following an initial brainstorming session, the team categorized ecosystem services according to the four MA services: provisioning, regulation, cultural and supporting, and searched for relevant indicators that could be tracked annually, using published literature and ecosystem service reports and tools, as well as data gathered through internal reporting. The process was supported at all levels of the company. The commitment has been made to measure and report on these services annually, beginning in 2013, allowing the company to gain valuable insight into the benefits provided by company lands.

For certain types of ecosystem services, changes are difficult to quantify and measure in any meaningful way. In addition, because these data will be reported publicly, the final reporting unit had to be readily available, which for some ecosystem services was not possible. To address this, in addition to reporting against 18 annual ecosystem service metrics, Weyerhaeuser decided to report against a separate class of ecosystem services. These "snapshot" services are excluded from the annual data collection because either only qualitative information is available



Honey production

at present, (thus the reporting unit is not sufficiently precise), or the service has been recently discontinued. These services are nonetheless important reflections of the value provided by Weyerhaeuser timberlands. These include: oxygen production, natural pollination, genetic resources, biochemical provision (taxol production), water purification, pest resistance and sense of place (traditional grazing and traditional hunting).

### The results

Weyerhaeuser will report annually against the 18 selected ecosystem services: five supporting, eight provisioning, two regulating, and three cultural. Much of the data are already gathered internally, but have never been reported publicly before. The company anticipates that by increasing transparency, its customers, communities and other interested stakeholders, will have a greater understanding of the broad range of ecosystem services that can be provided across its natural resource management landscape.

Since this is a multi-year process, Weyerhaeuser anticipates that further lessons will be learned as it reports against ecosystem metrics. The company aims to understand how accurately the metrics it has chosen will actually reflect the current state and trends of the ecosystem services provided by its timberlands. The company anticipates continuous improvement in its measurement and reporting process, as it obtains external and internal feedback.



Water regulation



Gravesites

#### FURTHER INFORMATION

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