



**INCREASING THE PACE, EXPANDING THE SCOPE, AND
IMPROVING THE EFFECTIVENESS OF CONSERVATION**

Ecosystem Marketplace Questions & Background

1. What are ecosystem services?

An ecosystem service is something the environment does for people, plants and animals. Examples include wetlands and forests filtering and purifying our drinking water and providing habitat for fish and wildlife; or trees absorbing carbon dioxide and releasing oxygen. People use and affect ecosystem services in the course of normal activities. Conservation, restoration and stewardship of nature will ensure that the ecosystem services we depend on are always available.

2. What is an ecosystem service market?

A market can exist when people are willing to pay for a product or service. Ecosystem service markets therefore arise when people are willing to pay for the creation or improvement of a particular ecosystem service. Consider the following example. A developer might unavoidably impact wetlands when building a new subdivision. To compensate for this impact, he or she might pay a nearby land manager to restore wetlands on his or her behalf. Just as in other circumstances where there is a buyer and seller, like when we pay for a gallon of gas or an hour of an attorney's time, measurement is a key component of such transactions. In the example above, this measurement might simply be acres, where the number of restored acres equals the number of impacted acres. Other times, measurement might include qualitative assessments (like how "good" the impacted or restored wetlands are). In any case, ecosystem service markets will trade ecosystem services in the form of "credits." Credits represent publically-approved units of ecosystem services that buyers and sellers exchange.

3. What's so interesting about ecosystem markets?

In short, they maximize the benefits of environmental restoration activities and minimize their costs. Paying others to take restoration actions offers a way for people who impact the environment to get greater and longer-lasting environmental benefits, at lower costs than ever before, by consolidating these actions in the places best-suited to do them. For example, instead of requiring ten developers to each provide one acre of restored wetlands in areas scattered across a city, a market would lead developers to meet their obligations by buying restored acres, or credits, in larger more strategic locations. This greatly increases the ecosystem value of the restoration actions, and greatly decreases the cost to provide it, by achieving efficiencies through scale. Ecosystem service markets make good economic sense by letting us invest money much more effectively than current arrangements allow.

4. What's the demand? Who wants to buy ecosystem service credits?

Existing regulations that protect natural resources create most of the demand for ecosystem services. Although, voluntary contributions by individuals and organizations to offset their own impact to the environment is a growing source of demand too. In many cases, restoring natural ecosystem services is the most effective way to meet these environmental regulations. When impacts cannot be avoided completely, or where a resource can be better protected elsewhere, ecosystem service credits provide a way for regulated parties (buyers) to pay other

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land and water managers (sellers) to restore wetlands, plant trees along streams or provide other ecosystem improvements.

In the Willamette there is currently a market for wetland credits. The rapid pace of development, coupled with strict laws protecting wetlands, has limited the places where wetland restoration can effectively occur. In the Mid-Willamette Valley alone, there is more than \$30 million in unmet wetland credit demand. This figure represents only a portion of the value a mature Ecosystem Marketplace would manage.

5. How does an ecosystem marketplace work?

At the core of an Ecosystem Marketplace is a centralized registry that inventories and accounts for all standardized units of ecosystem services (credits) available within the market. A registry documents when credits are created and who owns them. It then records trades between buyers and sellers. Those needing or wanting to buy credits go to the registry to purchase them, thereby off-setting the unavoidable impacts of their projects. Those who restore ecosystem services, beyond what is required by existing regulations, generate credits and can go to the registry to enroll them. The marketplace must be viewed as a transparent and trusted platform to both these parties to be successful. It must also be developed and managed in a way that provides the public with confidence in the ecological value of all transactions.

6. How might this work in the Willamette River Basin?

Temperature has been identified as one the Willamette Basin's most pressing issues and new regulations are making it harder for cities and industries to discharge warm water into streams. Not surprisingly, there's a rapidly growing interest in finding better ways to comply with new and more rigorous temperature standards.

If an ecosystem marketplace is to play a role in meeting these tougher temperature standards, there first has to be agreement on some market fundamentals—namely, the units of trade, and how they are created. The basic unit of trade in the Willamette for temperature will be kilocalories per unit of time. In order to work, all parties need to agree which restoration actions create temperature credits and how many they create.

The Willamette Partnership has worked with stakeholders and gotten agreement on the temperature credit values associated with restoring streamside shade, in stream flow and wetlands.

The Partnership is now working with stakeholders on an accounting system that can calculate numerous credit types from a variety of restoration actions. Markets for a range of other water quality parameters and endangered species habitats are expected to develop in the future as more roads, houses and infrastructure are built. Each market will have its own specific requirements tied to specific permits and regulations.

7. What organizations and groups are involved in developing the Willamette Ecosystem Marketplace?

The Willamette Partnership, a non-profit, is organizing the effort to develop an Ecosystem Marketplace in the Willamette Basin. This partnership is a coalition of conservation, city, business, farm and science leaders committed to increasing the pace, scope and effectiveness of conservation. It works closely with key regional organizations that represent all aspects of Oregon's community. These organizations include local, state and federal governments; state and national environmental non-profits; state agricultural and business interests; and other groups with a stake in, and a commitment to, the Willamette Basin.

8. I've never heard of this market-based approach before—is it new?

Markets for ecosystem services are fairly new. However, they are growing rapidly in terms of trade volume and environmental significance. It is widely expected that in the next decade, ecosystem service markets will represent trillions of dollars in transactions and millions of acres of restoration.

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9. Where can I learn more?

1. **Ecosystem Marketplace**. An array of ecosystem service market analyses and tools; up-to-date information and news; and a platform that gives the values associated with ecosystem services can be found on the Katoomba Ecosystem Marketplace Website.
www.ecosystemmarketplace.com

The Katoomba Ecosystem Marketplace was launched by the Katoomba Group. More information about their work can be found on their website.
www.katoombagroup.org

2. **Ecosystem Services Project**. This website provides information on Australia's ecosystem services project and marketplaces. It provides general information on ecosystem service markets, as well as publications and case studies on specific ecosystem marketplaces in Australia.
<http://www.ecosystemsproject.org/>
3. **The Environmental Trading Network**. This is a national clearinghouse for water quality trading projects.
www.envtn.org
4. **World Agroforestry Center**. This organization focuses on transforming the developing world's landscapes to enhance environmental security in food, nutrition, health, shelter, and energy. Their focus on ecosystem services and marketplaces is in the developing world and agroforestry. They have recently posted a new series of working papers on indicators, governance, equity, etc. on their website.
<http://www.worldagroforestry.org/cres/>
5. **Willamette Partnership**. Additional information about the Willamette Ecosystem Marketplace can be found on the Willamette Partnership's website:
<http://www.willamettepartnership.org/>