



**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 natural systems do for society – such as trees taking in carbon dioxide and releasing oxygen and creating shade, or forests purifying our drinking water, or wetlands filtering our waste water. Conservation, restoration, and stewardship of our environment allows nature to deliver these critical services, including cleaning our water and air, providing fish and wildlife habitat, pollination, lessening environmental hazards, tempering our climate, controlling pests and disease, taking carbon out of the atmosphere, and fertilizing our soils.

### *2. What is an ecosystem service market?*

A market exists when people are willing to pay for a product or service. **Ecosystem service markets** arise when people are willing to pay to establish or enhance a particular natural function. For example, a developer wanting to build a new subdivision might choose to meet air quality requirements by paying a nearby farmer to plant trees to absorb greenhouse gases over the life of the project. Just as we pay by the gallon for gas or by the hour for a lawyer's services, ecosystem services likewise require a measurement of how much is bought or sold. This measurement might be by the number of trees planted, acreage of wetlands restored, or by tons of carbon kept from going into the atmosphere. Often these quantities are traded in the form of "credits"—buyers will buy credits from sellers (for example, one wetland credit might mean one wetland acre is restored.)

### *3. What's so interesting about ecosystem markets?*

In many cases, paying others to take environmental actions offers a way for buyers and the public to get greater long lasting environmental benefits at lower cost than ever before. For example, instead of requiring ten developers to each provide one acre of restored wetlands scattered across a city, these developers instead might meet their obligation by buying credits from a nearby farmer to place all ten acres in one spot. This greatly increases the ecosystem value while lowering the costs to provide it. Ecosystem markets make good economic sense, letting us invest money much more effectively.

### *3. What's behind the demand for ecosystem services?*

In many cases, restoring natural ecosystem services is the cheapest and most effective way to meet environmental regulations. Industries, businesses, developers, and individuals who change the land or water must meet regulatory standards or compensate for additional unavoidable impacts. For example, a city might require a developer who cannot avoid impacts to a wetland to replace it, either on site or elsewhere; or state or federal laws require cities and industries to clean and cool wastewater before releasing it into a river. Where impacts cannot be avoided completely or where a resource can be better protected elsewhere, ecosystem markets provide a way for regulated parties (buyers) to pay other land and water managers (sellers) to restore wetlands, plant trees along streams or provide other ecosystem improvements.

### *4. How does an ecosystem marketplace work?*

In an Ecosystem Marketplace, regulated entities that spend millions of dollars each year to control a range of environment impacts would come to a centralized credit registry to find high quality credits they could buy to off-set unavoidable impacts. The registry inventories and accounts for all credits available within a market or a marketplace by documenting their generation, ownership, and trade. Farmers, foresters, and other land managers would register a variety of credits types created by taking voluntarily restoration actions that exceed their own regulatory requirements. An ecosystem marketplace is a transparent and trusted platform where ecosystem service credits can be registered, bought and sold, tracked, and monitored over time. To work, a marketplace would require a high level of transparency to provide regulatory oversight and give the public confidence in the ecological value of transactions.

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#### *5. How might this work in the Willamette River Basin?*

In the Willamette there is currently a market for wetland credits—there is lots of development occurring, and strict laws protecting wetlands, which adds up to a scarcity of places where wetland restoration can meaningfully occur. In the Mid-Willamette Valley, there is more than \$30 million in unmet wetland credit demand. And now a market for water temperature credits is emerging.

Temperature has been identified as one the Basin's most serious pollutants and new regulations are making it harder for cities and industries to discharge warm water into streams. Thus, there's a rapidly growing interest in new ways to meet temperature standards. The Willamette Partnership is estimating the temperature reduction values for restoration actions as part of the first phase of Marketplace development. The basic unit of trade in the temperature off-set market in the Willamette will be kilocalories per unit of time.

Markets for a range of other water quality parameters and endangered species habitats are expected in the future as more roads and houses and other developments occur. Each market will have its own specific requirements tied to specific permits and regulations.

#### *6. What organizations and groups are involved in developing the Willamette Ecosystem Marketplace?*

The Willamette Partnership is leading efforts in the development of the Willamette Ecosystem Marketplace. The Partnership is a coalition of conservation, city, business, farm and science leaders committed to increasing the pace, scope, and effectiveness of conservation in the Willamette Basin. It is working closely with key regional regulators, including: the Mid-Willamette Valley Council of Governments, Clean Water Services, David Evans & Associates, CH2M Hill, Defenders of Wildlife, the Nature Conservancy, the Pacific Northwest Ecosystem Research Consortium, and a multitude of natural resource agencies (including the Oregon Departments of Environmental Quality, State Lands, Water Resources, Fish and Wildlife, Transportation, and Economic and Community Development; and the federal Environmental Protection Agency and the U.S. Army Corps of Engineers.)

#### *7. I've never heard to this market-based approach before—is it new?*

Markets for ecosystem services are, indeed, fairly new—but they are growing rapidly in terms of trade volume and environmental significance. In 2006, \$30 billion moved through the global carbon market. Nationally, wetland mitigation banking is worth \$235 million.

#### *8. 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](http://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](http://www.katoombagroup.org)

**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/>

2. **The Environmental Trading Network**. This is a national clearinghouse for water quality trading projects.

[www.envtn.org](http://www.envtn.org)

3. **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/>

4. **Willamette Partnership**. Additional information about the Willamette Ecosystem Marketplace can be found on the Willamette Partnership's website:

<http://www.mwvcog.org/WillamettePartnership/WillamEcoMarket.asp>