

CREATING AN ECOSYSTEM SERVICES MARKETPLACE

INITIATIVE PROPOSAL – OREGON BUSINESS PLAN 2007

SUMMARY

Every year Oregon businesses and communities spend tens of millions of dollars on environmental compliance, much of it mandated by regulations designed to meet a very limited range of highly visible environmental problems. However, these investments do not address the more complex, systemic problems such as climate change or the loss of clean, cool water and clean air. This narrow focus diverts us from a path to sustainability where healthy ecosystems are the cornerstone of a healthy economy.

Now, there is an alternative. People are becoming increasingly aware of the benefits that functioning ecosystems provide to society and are increasingly willing to pay for them. These “ecosystem services” that nature provides include the clean air, water, and places to play that Oregon prides itself on. Worldwide, there has been an explosion of growth in market mechanisms to pay for ecosystem services. Carbon, wetland, habitat, open space, and hazard reduction benefits are all now actively traded in markets. If these individual markets can come together into an integrated *ecosystem services marketplace*, then economic enterprise and environmental stewardship can begin working together toward a sustainable future for all.

With Oregon’s brand values of integrity, stewardship, and innovation, our state is ideally positioned to capitalize on emerging opportunities in the ecosystem services marketplace. By embracing the concept and actively developing a marketplace, Oregon has an opportunity to draw revenue, jobs and talent to our region, while enhancing our leadership in sustainability. The Oregon Business Plan should support an ecosystem services marketplace initiative by:

- Catalyzing political momentum to foster, develop and use ecosystem service markets;
- Supporting a centralized system, based on common standards, to account for, track, and verify project performance to ensure the high quality and integrity of investments.
- Supporting a growing demand for sustainability education at all levels, and to enroll everyone in Oregon in the development of this, our most important marketplace.

Success in this initiative will create the financial incentives needed to restore and conserve the ecological systems that sustain the resources we care about and depend on for Oregon’s environmental and economic future.

Why This Issue Is Critical to Oregon’s Future

At the Oregon Leadership Summit in 2006, Michael Porter suggested that if Oregon could establish a regulatory environment that was both “pro-business and pro-sustainability” it would be “epic” for our regional economic development strategy. If we ask whether or not our current patterns of regulation and investment in ecosystem services are achieving Oregon’s sustainability benchmarks—including economic, community and environmental indicators—the answer is “no.”

In order to achieve these benchmarks, we must change patterns of regulation and investment to increase the ability of ecosystems to perform their essential services. If we do not improve this coordination, Oregon businesses will continuously face new and increasingly expensive regulations designed to address only isolated parts of a systemic problem. A well run and integrated ecosystem services marketplace will make it possible to achieve the triple bottom line by:

- **Economic Sustainability** – making green development more profitable.
- **Ecological Sustainability** – promoting activities that help recover ecosystems.
- **Social Sustainability** – providing more equitable distribution of societal burdens.

Oregon is uniquely positioned to create the infrastructure that makes an ecosystem services marketplace possible, in part because a number of Oregon businesses, agencies, and non-profits have already made considerable market development investments. The personnel and businesses necessary to construct and operate an ecosystem services marketplace would be sizable, essentially creating an entirely new industry centered in Oregon (not so different from Wall Street and the New York Stock Exchange). In addition to the new business necessary to support the market itself, there will be significant collateral benefit from businesses that site themselves in Oregon to take advantage

of the new market structure. For instance, trade journals and publications on sustainability or green building will tend to site themselves where the action is.

An ecosystem services marketplace created and centered in Oregon will contribute to regional and global health, and will define Oregon as the hub for sustainability and creative environmental and economic solutions. Establishing a leadership position now will draw revenue, jobs and talent to our region – and keep it here.

What Are Ecosystem Services?

Ecosystem services include all the benefits to society that nature provides. Healthy ecosystems provide a wide range of easily recognizable economic benefits. Forests, for example, provide paper, timber and specialty products like mushrooms. However, forests also provide easily overlooked environmental and aesthetic benefits, such as clean and reliable sources of drinking water, the ability to mitigate droughts and floods, carbon storage, fish and wildlife habitat, and opportunities outdoor recreation. Ecosystem services represent the full range of societal benefits provided by the natural environment.

What Are Ecosystem Service Markets?

In a traditional market, people regularly come together to buy and sell goods or services. To be effective, markets require sufficient supply, demand, access to market information, and established legal institutions. The US market in sulfur dioxide, a key component of acid rain, is one of the first large examples of a functioning environmental market. In 10 years, this market reduced emissions at significant savings for businesses. The World Bank estimated that the global voluntary carbon market was worth more than \$30 billion in 2006. There are also viable and growing individual markets for wetlands, water quality and species. Markets for ecosystem services each have their own nuances, but they all work in similar ways.

As an example of how this can work, consider a land manager, either individual or corporate. By planting trees, restoring wetlands, or switching to green building, the land manager increases the services – the benefits – provided by this particular ecosystem. This benefit is a product that can be measured, valued and sold. The right to use these ecosystem services – *credits* – can be ‘bought’ to offset unavoidable environmental impacts, or as a good will gesture (e.g., foundations wanting to ensure wise investments). To make these exchanges happen, a market needs a limit on the use of an ecosystem service, a way to measure increases and decreases in the service provided, and rules governing the transfer and monitoring of ecosystem service credits. To date, these markets have grown up in isolated contexts, or *silos*, that have generated the same fractured regulatory structure we have today.

For an ecosystem services marketplace to thrive, we need to move past the theory of creating markets and build a transparent, fungible, and vibrant global trading infrastructure. Within five years we need to have created this market, this “ecosystem NASDAQ”, which recognizes a suite of ecosystem service offsets. At the same time, we also need to have devised a credible way to integrate the standards, technology, and institutions of ecosystem service markets.

What Economic and Ecological Benefits Can Ecosystem Service Markets Provide Oregon?

This initiative gets to the core of how Oregon can move toward true sustainability. However, it also provides the key to making sustainability a product that Oregon can sell to the rest of the nation, perhaps one day, to the world. Oregon can and should be the leader in sustainability. Significant work has already been done in Oregon to understand how to ecosystem services accounting methods and how to structure systems that allow ecosystem service markets to function properly. We are poised to capitalize on this early investment. No other state in the country has the head start on ecosystem service markets that we currently enjoy. This competitive advantage can be realized if Oregon moves first to devise and execute an ecosystem services marketplace. Specific benefits include:

- Acquiring more efficient alternatives for meeting regulatory goals.
- Developing new businesses, jobs, and ‘idea exports’ in the sustainability cluster.
- Developing an economic model that embeds credible ecosystem service transactions.
- Providing conservation-based land management alternatives for natural places, farms, and forestland.

This opportunity is real. In the Tualatin River, trading in cool clean water will restore more than 35 miles of stream and restore flows to rivers. The local utility could have spent more than \$60 million in concrete and steel to reduce temperature at the outfalls of its wastewater treatment plants. Instead, it worked with partners to channel roughly \$6 million via a market mechanism to achieve greater results. This is just one of many existing Oregon innovations.

What Progress Has Oregon Made in Developing Ecosystem Service Markets?

Oregon is recognized globally as leader in markets for ecosystem services. Green Building leaders have developed standards that include incentives to develop ecologically, socially, and economically sustainable commercial buildings and residential communities. There are active wetland mitigation banks marketing credits throughout Oregon. The Willamette Partnership, a coalition of business and environmental leaders, is actively developing an ecosystem services marketplace (including standards, tools, and institutions). For the past nine months, a number of Oregon-based ecosystem service market leaders have been developing the framework for an ecosystem services marketplace. This group, the Ecosystem Services Council, recently presented that framework to a larger group of clear stakeholders, who gave unanimous support for the continued actions of the Council.

The Council is comprised of Oregon businesses, agencies and non-profits committed to ensuring that necessary infrastructure is in place, and to create a transparent, credible, high-quality ecosystem services marketplace. The Council will vet credit protocols, approve third party certification, and oversee a credit tracking registry. Furthermore, the Council will foster the creation of a global trading platform based in Oregon. The Ecosystem Services Council will be pivotal in developing this new robust, economic market that will serve as a global model. Its members have already accomplished the following:

- An ecosystem service accounting system for calculating credits and impacts
- A \$1.3 million grant from USDA to work with the regulatory agencies that would review and approve the accounting system for use
- A framework for market infrastructure to support a credible and effective market
- A framework for a national network of potential regional markets ready to take advantage of Oregon’s innovative efforts

What Is Preventing Oregon From More Effectively Utilizing Ecosystem Service Markets?

Time is the primary challenge and opportunity. Carbon markets are abuzz, and every day there are new protocols and tools to support carbon markets. However, no one is articulating the vision and strategy for an ecosystem services marketplace beyond carbon. If we are ready to move quickly, Oregon can redirect the discussion from carbon markets to ecosystem service markets. However, there are challenges. Stakeholders (e.g., natural resource agencies) are often focused on narrow slices of the ecosystem, with no incentive to work cross-jurisdictionally. People need to be engaged with a consensus vision for an ecosystem services marketplace that meets regulatory goals and that moves us farther along the path to sustainability. This includes agreed upon measurement, performance and verification standards. It necessitates the networked technology to register and account for ecosystem service credits and transactions over time. It rests on institutional arrangements to ensure project and ecosystem performance, manage risk, provide information, and open and maintain dialogue among stakeholders.

What Must Oregon Do In The Next 18 Months To Take Advantage of The Benefits That Ecosystem Service Markets Provide?

The Ecosystem Services Marketplace Initiative exists under the wing of the Ecosystem Services Council. The Initiative needs to be supported and encouraged to complete this mission as a sanctioned Oregon priority with support from the Governor's office, legislature, business community, and others. With that support, the following action items can be delivered (or significant progress made towards accomplishment):

- Vetted protocols that govern accounting, measurement, and verification of offsets
- A centralized registry tool to account for, track, and monitor transactions
- Continued outreach to local jurisdictions (with support from the State) to encourage integration of ecosystem services into land use planning and other policies
- Continued outreach to ensure that markets in other regions are developing to take advantage of the infrastructure being developed in Oregon.
- Institutional arrangements to link markets together into a marketplace (e.g., Oregon carbon offsets could be sold into the European markets)
- A risk assurance provision to safeguard against market failure.

How the Audience Can Help

The Ecosystem Services Council has committed to ensuring that the necessary accounting and credit tracking systems are developed and used so that the marketplace will be effective, efficient and transparent. The various entities involved in the Council have collectively gone further than anyone else in the country towards reaching this goal, but it needs support.

Government can support the effort by clearly stating Oregon's intention to become the future home of a registry that supports an ecosystem services marketplace. It can make sure that policies and regulations are in place to enable and support market development and usage. Finally, it can ensure that the roles of regulatory agencies are defined and properly integrated in the marketplace.

Business, not-for-profits, and foundations can support the effort by advocating for sensible market solutions within new or existing regulatory processes. Private capital will be needed to develop marketplace tools (e.g., the credit registry and trading platform connections). Private enterprise can work with the emerging ecosystem services marketplace to ensure that market offsets are adequately credible and transparent.

Initiative Leaders

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Background Resources

"Integrity, Stewardship, and Innovation *Capitalizing on the Oregon Brand in the Emerging Markets for Ecosystems Services.*" October, 2007

"Preserving Oregon's Working Forests: A Landowner's Perspective on Sustainability." Matthew W. Donegan, August 2007.

United States Department of Agriculture Forest Service. "Valuing Ecosystems Services." http://www.fs.fed.us/ecosystemservices/About_ES/faq.shtml