MARKETS FOR ECOSYSTEM SERVICES

Katoomba

The Ecosystem Marketplace's Daily coverage of the 2006 meeting of the Katoomba Group in Portland, Oregon (June 7-9)

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One for the Roses

The 9th Annual Katoomba Conference, which drew to a close on Friday June 9 in Portland Oregon, was a clear success.

People arrived from places as distant as South Korea, Australia, France and Brazil to discuss how ecosystem service values might be better integrated into the world economy.

Representatives from institutions as different as Goldman Sachs and the USDA Forest Service put their heads together to map out avenues of progress in the realm of conservation finance.

And local organizations worked to identify the resources they had at their fingertips to build bigger, better, more equitable markets for the rivers, trees and fisheries of the Pacific Northwest.

The sun shone (we kid you not), the speakers enlightened and the roses bloomed last week in Portland.

Even more important to the success of the event, however, was the fact that voices were raised not just in agreement, but also in dissent. One of the most interesting things to emerge from

this year's Katoomba event was the recognition that markets for ecosystem services (and those interested them) are experiencing growing pains right now.

As the economic tools for incentivizing conservation grow more sophisticated, it is becoming ever more difficult to leap from in-depth discussions of cap-and-trade carbon markets to detailed conversations about payments for watershed services. The increased sophistication of different approaches means that while they are better suited to the particular context in which they are being used, they are less similar to one another. In some ways, then, it is becoming ever more difficult to keep conversations about very different approaches under one roof.

Similarly, the recent addition of big money to the world of environmental markets (the global carbon market transacted more than $10 billion last year) has meant that powerful organizations are now working to drive some markets toward

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What's Sauce for the Goose...

by Adam Davis

Adam Davis, of the Sustainable Land Fund and the Ecosystem Marketplace, tells us why he thinks stacking is the only way to go.

For years now, the topic of credit stacking has been a major feature of Katoomba Group events. Questions have been raised about the possibility of 'currencies' that reflect more than one type of environmental value, about the science required to validate the provision of these values, and about the ethics of getting paid more than once for a single act of conservation. The topic was raised again at last week's Portland gathering.

Meanwhile, of course, the conferences for people who would develop and damage the natural systems that we would restore and conserve are way ahead of us. So called 'conventional' land uses 'double dip' all the time, and are happy to do so. In fact, they recognize what should have long ago been clear to us, which is simply that properties that produce more than one kind of value should be rewarded for more than one kind of value.

Last week I visited a number of properties in Southern California that have appreciated remarkably over the past few years. While the owner has been racking up equity in this fashion, he has also sold the mineral rights for the same acres of ground, realizing additional revenue.

In New York, people are paying good money for airspace above existing buildings in order to protect specific views, giving the owners of those properties a second revenue stream to supplement their more conventional rents.

Of course landowners of all stripes are leasing space to cell phone towers, railroad companies lease grazing rights, and everyone, it seems, rents space to billboard advertising companies.

The point is simply than in a market environment where there are willing buyers and willing sellers, people perceive different types of value and are willing to pay for different things.

In allowing 'credit stacking' for extraction and development uses, but not for conservation values, we've essentially required a higher standard for those who would protect and restore environmental features than for those who would destroy them.

Meanwhile, from the scientific perspective, the entire development of the ecosystem services concept has been predicated on measurement of actual benefits provided by intact ecosystems. The services vary, of course, depending on the nature of the land and its location, but in nearly every case there are multiple services provided. If a forested watershed is protected and managed primarily for the water quality related benefits, it may well be great news for an endangered species and for the net sequestration of carbon on the landscape.

Or perhaps not, but scientific measurement of the services delivered should determine what is allowed to be sold, if we are going to be in the business of selling such services.

The artificial parsing of value required by current regulatory structure will absolutely prevent the realization of the conservation economy. We know for a fact that conservation and restoration produce services of tangible value to specific types of buyers who must offset the impacts of their economic activities. As those that impact the environment move to 'internalize their externalities', they should be held to a clear standard, which is simply that they must restore and protect the same services that they damage. The same standard then, should apply to those who offer 'outsourced compliance' with this requirement: they must provide the same services that are impacted. Without this ability, we'll be like movie theatres that can't sell popcorn, or gas stations without restrooms, or… well, you get the idea.

One reason for the quandary we find ourselves in is the disjointed nature of the conversation we've been having. There's a whole world of people here in the U.S. who have become expert at wetlands restoration, and they have developed wetlands banks to reflect the value they're creating. These folks don't necessarily know the bird watching people who are part of a larger group focused on the value of habitat. And neither one of these groups know the silo of people figuring out how to get paid for biosequestration of CO_2 from land management, who in turn don't know the people expert in tradable development rights or the people getting paid for recreational values. Then there are the traditional conservation groups selling easements, and the limited conservation development groups and the land trusts and so on.

"Single streams of revenue from single types of ecosystem service value are not reflective of how ecosystems actually work."

There are ways out of this quandary, of course, and the Katoomba Group is one of them. Representatives of all these different products and services were in Portland last week peering over the fences at each other's approaches to developing revenue from conservation and restoration.

One promising development for us to consider is happening in Oregon, where the Oregon Department of Transportation, in cooperation with both the US Army Corps of Engineers, the US Fish and Wildlife Service, and six other State and Federal agency partners, is creating a new currency that reflects both biodiversity and wetlands values. This new instrument, called a Habitat Value Credit, is designed to recognize that a given acre can provide multiple real values, and at the same time provide assurance to regulators that impacts are fully offset. You might remember hearing about this from Kevin Halsey of Parametrix during the panel discussion last Friday.

Other initiatives, like the Sustainable Land Fund which I'm part of, are developing multiple revenue streams from multiple conservation and restoration actions, along with economic activities that support conservation on the same parcel. Fred Danforth spoke about the SLF on Thursday afternoon. Major NGO's like the Conservation Fund are doing projects that integrate sustainable (FSC certified) forestry with conservation objectives, and members of the development and Socially Responsible Investment communities have started discussions on integrating green building and limited development to support conservation and environmental outcomes.

As we continue to work for market mechanisms and incentive programs that restore and protect the land we need and love, we must keep refining the vision of where we want to go. Single streams of revenue from single types of ecosystem service value are, ironically, not reflective at all of how ecosystems actually work. Ecosystems are the antithesis of monocrops, and the landscapes we create will need to reflect the financial as well as the biological diversity produced.

While farming, forestry, mining and development all benefit from multiple revenue streams, we'll never create a countervailing economic force that recognizes the value of conservation unless we have the same opportunity. The truth is that multiple types of value are in fact created by protection and management of intact natural systems, and people who protect and manage them deserve to get paid for the value they create.

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One for the Roses

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ever-greater transparency and efficiency. Reconciling this 'smooth it out and scale it up' approach with the persistent and appropriate demand of local communities for access to emerging environmental markets can be difficult.

As conversations at this year's conference jumped from trading ratios to stacking credits to finance models, some grew concerned that too little attention was being paid to the views and rights of community landowners. Participants from Mexico's Sierra Gorda Biosphere Reserve, the Society for Ecological Restoration and the Tulalip Tribes all raised their voices in defense of the idea that some values can not – and should not – be parsed out of ecosystems.

Faced with the formidable challenge of keeping everyone on the same page as markets for ecosystem services take shape, some might advocate that the time has come for different markets, different sectors and different people to part company. But that would be against the spirit of Katoomba and, more importantly, it would be mistake.

If there was one thing that this year's Katoomba Conference revealed, it is that collaboration between different sectors of society is more important than ever before. On all sides of the world, markets are being designed and legislation is being written that will move payments for ecosystem services out of the conference room and into the natural world around us.

The next decade represents the most important window for those who want to shape markets for ecosystem services. Ensuring that these markets are both equitable and efficient will not be easy, but last week's conference suggested that the Katoomba Group remains ready to rise to the challenge.

The Ecosystem Marketplace

Morning Workshops

Working in Watersheds

by Andrew Bell

Al Appleton opened Friday morning's workshop on water markets with the story of his experience pioneering New York City's watershed restoration in the Catskill Mountains. Appleton used the narrative to demonstrate that water quality markets have to be a truly three-sided deal if they are to work: sellers, buyers and the environment all must get what they need.

Bruce Knight followed Appleton with another basic point – *keep things simple!* Once a willing buyer and willing seller have agreed on something, don't ornament the deal any further, he said. Just make the deal work.

Terry Williams, Mark Kieser, Jeremy Sokulsky, and Buzz Thompson followed these two presentations with their own impressions of how to make water quality markets effective. Among their many pearls of wisdom, several common threads could be heard: make sure that the market drivers are adequate, and that the rights to services are well defined. Finally, Dave Primozich and Sara Vickerman spoke of their work with the Willamette Partnership, a case study to help seed discussion in the second portion of the workshop.

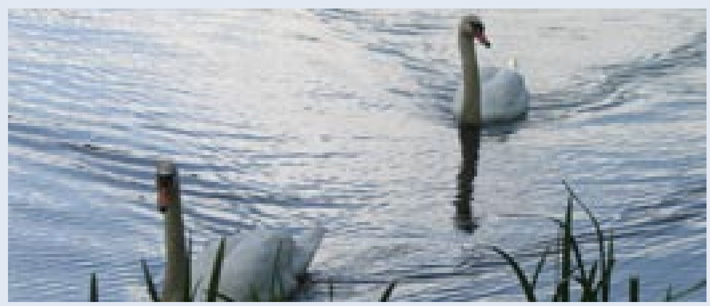
The Discussion

How do we make sure that markets have a net restorative effect on ecosystems?

This theme dominated the discussion in this workshop, and guided it through ideas like the bundling of ecosystem services, the balance of private and public institutions, and proper governance.

The discussion took a quick turn away from the strict discussion of water quality trading into the trading of ecosystem services bundled together – water quality along with carbon emissions or biodiversity as a single credit. Youn Yeo-Chang of Seoul National University quickly pointed out the difficulty in doing such a thing – the markets for the individual credits like carbon emission or biodiversity are made up of different consumers, who may not wish to purchase bundled credits.

On the sell side, however, the value of bundling for service suppliers was soon made very clear. Bundling credits allows different agencies to trade within the same credit union, a huge boon for emerging markets. And credit bundling allows producers to receive returns on all of the improvements to the land that they are making. Said Adam Davis, "the critical thing is that when you do the right action on the land, you are *producing* 5 or 6 different types of value, and you have to get paid for those!" For example, an improvement to water quality in a stream reach can lead very quickly to a jump in local biodiversity. The important task becomes convincing buyers that the most efficient use of their money is to buy the whole ecosystem rather than any one or two of its services.



Another important issue in the development of markets for ecosystem services is that of the differing roles that public and private institutions need to play in them. The sense from today's workshop seemed to be that government should not subsidize profit making by private interests. An answer to this could be to create tools that turn government investments into lending investments, rather than grants. Government investment would then take the form of start-up funding to be paid back over time. A system where government received a payback from industry might be a welcome change from the perverse subsidies that exist today.

Al Appleton pointed out that proper governance structures were a prerequisite for any of these markets to work. This is true, said Knight, but he cautioned that too much complexity might have a damaging effect on the very markets they are meant to enhance. Following up on the "keep it simple" approach he advocated in his panel presentation, Knight warned of a thickly governed market, "there is no system that is more inept at price discovery than the federal government."

Morning Workshops

Financing Biodiversity Conservation

Presentations:

Judging from the level of conversation during Friday morning's biodiversity workshop, participants arrived with eight hours of sleep and a good cup of coffee under their belt.

Panelists shone a spotlight first on regional markets for biodiversity.

Kevin Halsey, a regulatory specialist from the environmental consulting firm Parametrix, used his leadoff position to describe how conservation banking was helping Oregon's natural resource managers address four threats to the state's storied salmon populations. Halsey's recent work has focused on incorporating salmon accounting tools into an overall common currency for biodiversity, thus allowing for salmon conservation to be stacked with multiple resource values.

Preston Hardison, Watershed Policy Analyst for the Tulalip Tribes then put Halsey's overview of salmon banking in the larger context of regional and Native American history and the rights of tribes to salmon.

Hardison was followed by, Kerry ten Kate, Director of Investor Responsibility, Insight Investment and the Director of Forest Trends Business and Biodiversity Offsets Program (better known as BBOP), Mark Eigenraam, Principal Economist, department of Primary Industries in Victoria, Australia, and Jim Shields, Wildlife Manager in New South Wales, Australia, all of whom focused on what is happening outside the US. Ten Kate spoke about how certain businesses are voluntarily agreeing to offset the damage they are causing to biodiversity. She said that in order to do this responsibly, there is a need to better understand how to measure the damage, how to measure the offset, and how to determine whether or not it is "equivalent". This is precisely what BBOP –through a series of global pilot projects—was set up to help do.

Eigenraam and Shields then explained a bit more about how market-based mechanisms to protect biodiversity are being approached in Australia. They were followed by Dan Spethman of Temple-Inland, Jessica Fox of EPRI, and Craig Denisoff of Environmental Business partners who brought the discussion back to the US. They talked further about conservation banking, about how companies are looking at these mechanisms to help deriver further value from their lands, and about the need to ensure that these mechanisms are scientifically-sound, and business friendly.

Professor James Salzman of Duke University got the discussion off to quick start as the session's moderator by asking participants to consider whether or not conservation banks for threatened salmon populations were a good conservation tool.

As the president of the National Mitigation Banking Association, Craig Denisoff (founding partner of Environmental Business Partners), addressed Salzman's question head on by observing that such banks would only be good tools if their use was limited in scope. If compensatory mitigation for the destruction of salmon habitat becomes widespread, it suggests that the environment is sustaining too much degradation. This, all agreed, was not a desirable environmental outcome.

Participants also expressed concern over the issue of perpetuity. In theory, conservation banks must be protected forever, but some questioned how realistic this conservation ideal is in a dynamic world. Indeed, the room's legal eagles agreed that all 'in perpetuity' contracts are subject to exogenous change. To hedge future risks to salmon habitat, some raised the idea of time limited credits.

The discussion then took some time on a question asked from the audience: how to reconcile the need for long-term conservation, with the short planning and performance horizons of companies; companies that look at performance not in terms of decades, not even in terms of years, but in terms of quarters.

Last but not least, the group discussed the issue of asymmetries of information. And, while some people felt frustrated that information wasn't as available as they might wish, a financier in he group pointed out that this was not surprising since financiers make lots of money profiting from asymmetries of information, and profiting from managing risk. It was then noted that profit from large asymmetries of information are normal in a young market, but that as the markets mature, these asymmetries are ironed out of the market. This, it was noted, is precisely what the Ecosystem Marketplace is trying to do. Panelists agreed that mitigation banking needs to become a much more transparent process and predicted that this would happen naturally, as information grows more democratized in the fast-evolving market for mitigation and conservation credits.

Afternoon Workshops

Ecosystem Services in the Marine Realm

by Sylvia S. Tognetti

On Friday afternoon, Tundi Agardy, executive director of Sound Seas, opened the final workshop of the conference with some highlights from the Millennium Ecosystem Assessment. Coastal zones make up only 5% of the world's land mass, she said, but support approximately 40% of the global population.

Following Agardy's introduction, Mathew Wilson from the University of Vermont presented an overview of standard techniques for valuing goods and services in coastal and marine ecosystems. Wilson said his literature review of valuation studies was designed to give policy makers a sense of the upper and lower limits identified by researchers. Judith Kildow, director of the National Ocean Economics Program at California State University at Monterey Bay, also kept the audience focused on valuation. Kildow stressed the need for information concerning the social context in which ecosystem services are being valued. Without taking sociology into account, she said, economic data doesn't make any sense.

Bruce Kahn, an investment management consultant for Smith Barney, followed Kildow's call for a practical approach to research with a practical presentation entitled "a view from an ecologist on Wall Street." Kahn maintains that the flow of capital generates positive feedback loops leading to better management practices and greater investment. By conducting risk-analysis of companies, Kahn says he has been able to demonstrate that good environmental performance can provide good returns. This kind analysis is a departure from that typically done to support Socially Responsible Investments, which assume that environmental risks will be made apparent through market signals. Based on this recognition, Kerry ten Kate suggested there may be a market opportunity in providing more aggregated information about environmental performance than can be found in academic research.

After the short trip to Wall Street, Ed Backus and Astrid Scholz, both vice presidents at Ecotrust, led the discussion back into the realm of science. Both Backus and Scholz discussed the challenge of building a knowledge base capable of supporting those working to identify the importance of particular ocean areas for particular purposes. Much of the current data, said both speakers, is of poor quality. Hoping to improve this state of affairs, the California Nature Conservancy, has collected data on 16 biodiversity priority sites that are now threatened by human activities such as bottom trawling.

Chuck Cook, director of the Coastal and Marine Program for the California Nature Conservancy, discussed his organization's efforts to adapt land-based tools to ocean conservation. Cook and his team are hoping to support a transition in the pacific west coast fishery from high volume and low value to low volume but high value. To further this aim, Cook says they are buying up trawl permits, and have negotiated agreements with regulators to ban trawling on 3.8 million acres. They have also acquired 5 of 6 permits needed to reach their effort reduction target. Those who sell the trawl permits are asked to sign an agreement not to engage in the bottomtrawl groundfishery.

After the panel of presenters had finished, Adam Davis from the Sustainable Land Fund and the Ecosystem Marketplace commented that the workshop was informative regarding background work but that more attention should be given to opportunities for money to actually change hands. 10 years ago, he observed, similar discussions about land were focusing on theoretical aspects of valuation, applicability of mechanisms, and where to get started. Since then, land issues have gotten more traction and leverage and, according to Davis, they have lessons to teach those interested in marine ecosystem services. In particular, Davis mentioned Lake Tahoe, where there is now a market for the removal of impervious surfaces, a major conservation concern in coastal zones.

Closing the session on a serious note, Judith Kildow commented that while most of the discussion had been about fishing, it was important to recognize that oceans (because of climate change) now are changing in ways that may make fishing look minor. The need to move ideas out of the conference and into the ocean, all agreed, is urgent.

Afternoon Workshops

Harnessing Carbon Markets

by Daniel Ortega

For half of Friday's participants, last week's Katoomba Conference closed with an in-depth look at carbon markets. The workshop suggested that while the Pacific Northwest is brimming with innovators and poised for significant market development, there is still a long way to go before real carbon markets are up and running.

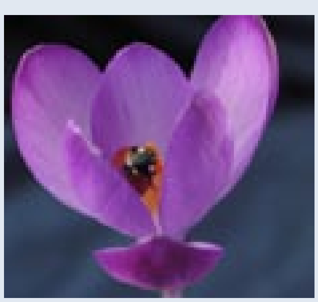
The moderator, Ricardo Bayon, director of the Ecosystem Marketplace, kicked off the session with a series of questions about the future of global, national and regional carbon markets. The panelists then covered a diverse gamut of topics, highlighting several innovative projects along the way.

Catherine Mater, president of Mater Engineering Ltd., began with a look at two projects on private forestlands. Based on her experience, Mater said she believed that the global carbon market could and should prove a useful tool for foresters working on Western lands. In particular, Mater felt that the global carbon market could play an important role in helping US forests remove biomass as a way of preventing catastrophic forest fires.

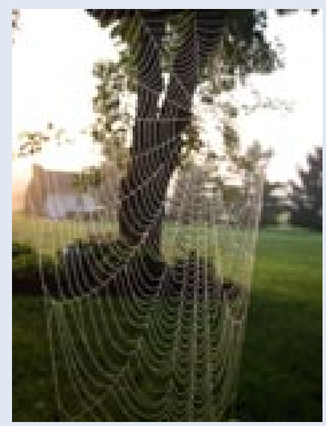
Radha Kuppalli, manager of business development at New Forests, followed Mater's comments with a quick presentation about her company's business strategy. "Forestry investments are bringing out new business models that incorporate ecosystem services into forestry investment management and advisory services firms," Kuppalli said.

To wit, institutional and private equity funds now dominate the forestry sector, and a wide range of investors are looking to stack environmental returns on top of sustainable timber harvesting. Shifting her focus from Australia (where New Forests is based) to the Pacific Northwest, Kuppalli stressed the importance of integrating efforts into a regional carbon strategy.

The next panelist was Bjorn Fischer, business development manager at The Climate Trust. The Climate Trust is one of the leading US buyers of greenhouse gas offsets, with a project portfolio totaling 1.7 million metric tons of carbon dioxide. "Carbon offsets are a very effective tool, but they are not a single solution," Fischer said. Specifically, Fisher emphasized the importance of future climate change regulation in the United States. Mark C. Trexler, president of Trexler Climate + Energy Services, Inc. also underscored the importance of regulation. Trexler began, in fact, by asking the audience to consider whether or not voluntary markets were really an effective means of combating climate change.



Once Trexler had the debate rolling, Michelle Passero, director of policy initiatives at the Pacific Forest Trust, kept things interesting by highlighting the philosophical issues raised by carbon trading. The audience generally agreed that parsing values in nature can be problematic for those who conceive of natural landscapes as holistic systems. Workshop participants also stressed the need to ensure that the rights of impoverished communities were not trampled in the rush to market. "If we want the market to drive equity and social development issues (i.e., Indigenous rights, human health) we need to establish the institutional arrangements and signals that we want the market to feature," Trexler observed.



The conversation then shifted to the question of carbon markets in the Pacific Northwest. The recent expansion of the Portland-based Climate Trust (which mitigates carbon emissions for utilities in Oregon and elsewhere), and the creation of a carbon registry in California underscore the considerable interest in ecosystem market development in the Pacific Northwest. The punch line for regional participants in Friday's carbon workshop, then, was the need to connect the dots between registries, projects and legislative initiatives in California and Washington with those up and running in Oregon.

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About the Ecosystem Marketplace

The Ecosystem Marketplace seeks to become the world's leading source of information on markets and payment schemes for ecosystem services; services such as water quality, carbon sequestration and biodiversity. We believe that by providing solid and trust-worthy information on prices, regulation, science, and other market-relevant issues, markets for ecosystem services will one day become a fundamental part of our economic and environmental system, helping give value to environmental services and thereby helping conserve them.

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