

Katoomba

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

Friday, June 9, 2006

Volume 1, Issue No. 3

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Subverting the Subdivision

Conservation Development in the United States

by Jason Amundsen

Conservation development is the new hot term when it comes to land conservation in the United States. The Ecosystem Marketplace finds out what it is and why people are interested in it.

A new breed of residential developer is emerging from the dark woods and flowing wetlands. Challenging our conventional assumptions of how homes are built and sold, these business people are making land use and open space a dominant criteria when building new communities. And, they hope, numbering the days of the standard five-acre subdivision.

Seemingly odd bedfellows, developers and land-use advocates have created a new trend in homebuilding called the conservation development. According to LandChoices, a nationwide



Business people are making land use and open space a dominant criteria when building new communities...numbering the days of the standard subdivision.

organization devoted to educating property owners about land preservation, "Conservation subdivisions preserve 50% - 70% of the buildable land while still allowing the same maximum number of home sites as conventional subdivisions."

For example, give a traditional developer two hundred acres and it will likely be subdivided into 40 homes on five-acre lots. Give a conservation developer that same parcel and the best land will be managed into perpetuity with a similar 40 homes built on one-acre lots.

Open space advocates are quick to point out that conservation developments differ from clustering homes together in a development. Clustering uses the best lands for development and only 25-30% of the worst land- steep slopes

THE KATOOMBA GROUP'S

Ecosystem Marketplace

Subverting the Subdivision

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and wetlands- are set aside as open space. "Clustering is all about saving infrastructure costs and the open space is secondary," says prominent land use advocate Randall Arendt. "Clustering is done by developers who want to save on utility runs and the open space is simply a byproduct."

But before you mistake these developers as going green out of the goodness of their hearts, one should know it is good business.

These men and women aren't ideological fringe players willing to sacrifice profits for principles. They understand that the advantages of their work are not solely ecological, but also finan-

from their experience building homes adjacent to golf courses. "Golf courses were the first open space developments. Developers could charge 25% to 100% more for the same lot if it was next to a golf course. But if you scratch the surface, most buyers don't play golf. They just like the open space," McMahon says.

The Red Wing Land Company's experience in southeastern Wisconsin similarly demonstrates the economics of open space preservation and home building. Their Sugar Creek Preserve project, with 52 home sites on 260 acres, was different than almost every development being built north of Chicago. Approximately 69%, or 177 acres, was put into a permanent trust for the benefit of all homeowners.

The company's president, Kurt Andrae, pointed out the advantages for developing only a

portion of the land. "There's an absolute savings overall," Andrae says. "If done correctly, there's less paving, less infrastructure costs in terms of fewer utility, sewer, and water lines."

According to a study entitled *The Economics of Conservation Subdivisions* published in January, 2006 in *Urban Affairs Review*, the economic benefits of conservation developments were apparent.

The study's author, Rayman Mohamed, noted that, "...conservation subdivisions can provide higher profits to developers. Lots in conservation subdivisions carry a price premium, are less expensive to build, and sell more quickly than lots in conventional subdivisions."

Those essential truths are being played out in northern Florida. John Kohler is developing Centerville in northeast Leon County. Like other conservation communities, Centerville puts 70% of 975 acres into a permanent land trust.

The demand for Centerville and its design was initially overwhelming. During Kohler's invita-

tion only 'friends and family release' earlier this year, all 86 home sites sold in seven hours.

"Our lot absorption rate is off the charts compared with traditional developments," Kohler says. "Given apples to apples, I think conservation lots sell for 20-30% more than traditional lots. The demand has been incredible. We haven't even finished our paving yet and, out of 200, we have 122 lots under contract."

Yet the protected land in and around Centerville will continue to be an economic asset for northern Florida. "All that open space allows us to continue a selected timber harvest and other agriculture. This land been growing high quality timber for the past 100 years and even with our development, we can continue to support the local economy," Kohler says.

Just as there no set definition for what exactly constitutes a conservation development, there isn't a set rule about who ultimately controls and is responsible for the open space.

"It's quite a mix of people and organizations who put the land into easements and trusts," says Jane Prohaska, Executive Director of the Minnesota Land Trust.

Sometimes the open space is turned over the public to own, other times it's the developer who retains control, or in certain situations a homeowner's association may be responsible for the open space. "There's no hard and fast rule," says Prohaska. "But in every case an easement, another layer of legally enforceable rules, is put on the property to restrict development."

The message of cost savings and profits for developers is slowly beginning to reach the traditional development community.

A publication oriented toward conventional builders, Big Builder magazine, indirectly praised the elements of conservation design. In a May, 2006 article entitled *Intentional Grounding* author Teresa Burney noted that, "Leaving land in its natural state or building trails through is cheaper than building infrastructure or golf courses."

Reality Check

Conservation developments look really good on paper. Land is preserved, homes are being built, the economy of an area continues to grow and all parties end up happy, prosperous and satisfied.

Yet being green and saving open space means that these cutting edge developers frequently face obstacles from governments and the public that traditional builders don't encounter.



"Golf courses were the first open space developments...But if you scratch the surface, most buyers don't play golf. They just like the open space."

cial. There's a double bottom line. Many conservation developers are making more money than their more traditional counterparts.

Double Bottom Line

Ed McMahon, a senior resident fellow at the Urban Land Institute, says that developers began to learn the financial value of open space



"I'm convinced that if we stopped what we're doing and built conservation communities regionally we'd see a huge difference twenty years from now."

"For developments like these to succeed you need a unique environment to work in," says Kim Chapman, principal ecologist with the Applied Ecological Services in Prior Lake, Minnesota. "Specifically you need a partnership between 3 major actors in the development process: the developer, the regulatory and permitting community, and the land advocacy community," Chapman explains. "If any one of these partners is not involved, it's common to see conservation developments not get built."

In order to help connect all the dots, Land-Choices, a national non-profit based in Milford, Michigan, was formed last year. Its founder, Kirt Manecke, sees as a large information deficit amongst property owners.

"Our mission is to provide land owners with choices that conserve land," he says. "The biggest problem that we see everyday is that landowners think that they have no choice, that they have to sell to a conventional developer."

"Conservation subdivisions face a simple marketing problem," Manecke summarizes. "Officials, those who do zoning and permitting, simply have never heard of it. And if the public doesn't understand it, they aren't going to buy it."

Leveraging the Land

In southeast Wisconsin, at Sugar Creek Preserve, Kurt Andrae has found that he and his staff have had to educate prospective buyers on the virtues of permanent open space. One question which keeps cropping up is whether or not the buyer feels like they are getting their monies worth.

"People really have this mindset, 'If I'm spending \$150,000 then I should get at least 5 acres.' What we explain is that by spending the same amount for one acre, you get permanent deeded access to 177 acres. Nine times out of ten we'll hear, 'You're right. That makes sense,'" Andrae said.

The Red Wing Land Company also makes a pitch that, according to Andrae, resonates with over-worked Americans. "What we try to impart upon prospective buyers is that if they buy the 5 acre lot that our competition is selling then they're responsible for maintaining it. Buy a 1 acre lot in our conservation development," Andrae said, "and you're buying yourself 80% more time."

Speaking with John Kohler about his development Centerville in northern Florida, he makes it clear he's no ordinary developer. He talks

passionately about flow and how one parcel of land ought to mesh with another. Kohler states that while he may be dividing the land, his work must integrate into the framework of a larger whole. "You need to understand that ecosystems are not hindrances, but assets. And even if you leave seventy percent of land in open space, and you don't complement or improve upon the flow, then you're missing it," Kohler says.

Building a conservation development takes efforts far outside the norm.

"While our lots may have sold faster, it took us a lot more time to plan, something like 40 to 50% more intellectual capital and brain power than a traditional development," Kohler says. "To do it right you need the right architecture, right ecosystem, right covenants and restrictions, and the right team of guys to take care of the common space and keep it beautiful," he continues. "Most developers and engineers aren't used to the level of diligence that's required to do a conservation development."

But despite all the good news spreading about conservation developments the traditional subdivision is alive and well in northern Florida.

"I've been asked to do traditional developments and I won't do them," Kohler says. "Everyone in north Florida is hell bent on dividing every piece of land they can get their hands on for no rhyme or reason. We're loosing our ecosystem. We're loosing our agricultural base and rural lifestyle. I'm convinced that if we stopped what we're doing and built conservation communities regionally we'd see a huge difference twenty years from now."

Kohler is proud of his company's efforts. Instead of being proprietary about his work, he's invited other community builders to Centerville to see it first hand.

"For the love of north Florida and to protect our rural lifestyle we wanted to show others that it could be done. Conservation developments take more work, but it makes sense," he says.

And as for Kohler's immediate future? "I'm sold on the idea of preserving the land and making a living," he says. "We're doing two more."

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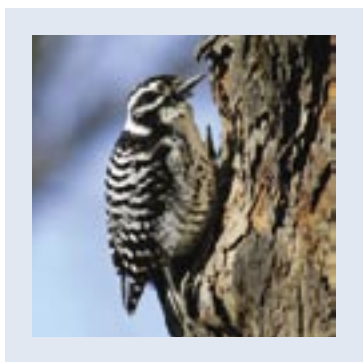
Session 1

New Carbon Opportunities

by Katherine Hamilton

A panel on “New Carbon Opportunities” opened the day and introduced two crucial themes: a discussion the concept of quality in environmental markets and questions concerning how forestry will fit into the evolving carbon markets. Introducing the panel, Ricardo Bayon, director of Ecosystem Marketplace, described the growth, volatility, and enormous potential of both the voluntary and regulatory carbon markets. Bayon ended his introduction with a New Yorker comic illustrating businessmen waiting in line for a wizened ‘carbon sage’ and excitedly stating, “It’s great! You just tell him how much pollution your company is responsible for and he tells you how many trees you have to plant to atone for it.” The panelists, carbon sages themselves, introduced points demonstrating that while the answers are not so simple, carbon markets do offer exciting opportunities, including a means for forestry to play a role in ‘carbon atonements.’

The first panelist, David Brand, Managing Director of New Forests, pointed out some of the challenges and opportunities in the carbon market, using his experience with the New South Wales



(NSW) Greenhouse Gas Abatement Scheme, a small, regulated market in Australia. Brand explained the growth of the NSW market, the creation of new institutions in response to the market, and increasing use of forestry in the market as cost curves have increased. Brand also noted the importance of forestry in the voluntary market, “where it is in specific demand.”

Following Brand’s discussion of the NSW scheme, Mark Trexler, president of Trexler Climate and Energy Services, took a step back in his presentation on “The Carbon Market: Opportunities and Logjams.” Looking at both the voluntary and regulatory markets, Trexler introduced two key issues for the markets, the issue of quality and “the devil of the market: additionality.” He argued that carefully considering the additionality and

the quality of offsets is essential for “maintaining the credibility of the market” for its long term success. Without abiding to careful considerations of additionality, Trexler warned that the offset demand could be met by non-additional or “false positive” offsets. He also reminded the receptive audience of “A big question, easy to forget: Are markets actually helping us address the climate change?”

Presenting the state of California’s progressive policies in working to address climate change, Michelle Passero, Director of Policy Initiatives and The Pacific Forest Trust, described, the state’s climate legislation, Governor Swatzeneggers GHG reduction goals, three forest protocols, and new private sector initiatives. Describing regional/national outlooks for a forest carbon market, Passero presented policy makers as at the brink of new regional and potentially national regulation with “an opportunity to do it right.”

Mike Burnett, Executive Director of The Climate Trust, opened his presentation with the point that, there are “Two big things going on in the planet, biodiversity down and carbon up,” and that carbon markets could cover both critical challenges. Picking up on points

by Trexler and Passero, Burnett focused on the importance of forestry for the carbon market, describing deforestation as the second largest CO₂ source. After explaining the types and attributes of forestry offsets, Burnett also suggested key policy tools for encouraging forestry in carbon markets, such as cooperation between industry and environmental groups, legal developments, institutional developments, and new intellectual capital. Like Trexler, Burnett also focused on the importance of additionality, mechanisms behind quantification, and “forestry’s most challenging offset criteria: permanence.”

Responding to a long line of questions, the panelists closed the session with a few comments summarizing the importance of carbon credit quality and the role of forests in contributing to quality. Brand noted, “The thing about the carbon market is that it only cares about carbon. If you want to consider issues like biodiversity or social benefits you need to build those factors into the market.” Building such factors into the U.S. market now could be critical for the future. When questioned if they thought the U.S. would introduce greenhouse gas regulation, the panelists unanimously cited predictions of near term regulation.



Session 2

Biodiversity: Messages and Markets

by **Cameron Walker**

Portland Katoomba's second session on Thursday, "Biodiversity: Message and Markets," presented a wide-ranging overview of the potential for valuing biodiversity.

Moderator Jessica Fox, director of EPRI Solutions' Eco-Assets program, started out the presentations by pointing to the need for clear definitions within conservation banking. "Is a conservation bank just a piece of property protecting habitat, or does it have to be backed by a regulatory regime?" she asked.

One area in which biodiversity and potential markets are searching for definition is in the USDA Forest Service's investigation of ecosystem services. Sally Collins, the Forest Service's associate chief, said that national forests -- with five million acres of wetlands, 200,000 acres of fishable streams, and 28 million acres of wild turkey habitat -- offer a huge biodiversity resource.

The Forest Service, while not directly involved in markets, has realized that its actions affect markets. They're taking a multi-pronged approach in their research, which includes valu-

ing ecosystem services on the 193 million acres of national forests; preliminary estimates, Collins said, run to the trillions of dollars.

Craig Denisoff, founding partner of Environmental Business Partners, then took the podium to outline banking basics. Banking, he said, combines habitat and species mitigation with serious business. "I'm a developer," he said, "I build homes for birds and bunnies." These homes, in the form of large-scale habitat preservation, can be used to offset impacts to wildlife protected under the Endangered Species Act. According to Denisoff's tally, the more than

500 wetland mitigation banks (and between 70 and 100 species banks) bring in \$200 to \$300 million in gross revenues annually.

Next, Kerry ten Kate, the director of investor responsibility for Insight Investment, talked about biodiversity offsets as a way that companies can mitigate risk. During ten Kate's early work with businesses needing to offset biodiversity impacts, she said she was often skeptical when companies expressed interest in gaining social, as well as regulatory, license for their projects. Now, she said, it's clear that receiving this social license can be instrumental in how a company manages its risk and public reputation -- activities that can help access additional capital.

Both private companies and governments have been increasingly interested in biodiversity offsets, she said. "It's a mechanism to bring about more and better conservation," she said. "Basically, everybody is looking for a holy grail."

Following ten Kate, economist Mark Eigenraam discussed Australia's innovative BushTender and EcoTender auction approach to biodiversity and other ecosystem services. Instead of having a

no-net-loss policy -- the aim of U.S. regulations underlying mitigation -- Victoria's biodiversity policy established net gain as its primary goal.

To make these programs work, Eigenraam said, the scientific community needs to explore how ecosystem services can be valued. "It's science not for science's sake, it's science to inform policy," he said.

The final speaker, Temple-Inland's Dan Spethmann, gave an industry perspective on the ecosystem markets scene. The company, which owns more than 2 million acres in Texas and the southeast, has also been looking at the same ownership changes in private lands, and has been investigating how ecosystem markets, including biodiversity markets, might address this.

From his perspective, there's a problem in valuing the services that forests provide. "We need to know what it is we're getting to understand what it is people are willing to pay," he said. He cited the need to work collaboratively and to look ahead. If people continue to hold onto past notions of how to structure markets, he said, "we're going to slow ourselves down."





Overused and Undervalued: The Plight of the Coast

By Tundi Agardy

Forty percent of the global population now lives within a thin band of coastal area comprising 5% of the total landmass. Despite the mounting population pressures on coastal resources, income generation and human wellbeing are currently higher on the coasts than inland. Why? In large part, people living next to the ocean fare better because coastal ecosystems are among the most productive systems of the global environment, supporting not only marine and terrestrial food webs but also providing key goods and services for humankind.

Coastal communities and industries exploit coastal goods of all kinds: fisheries resources; genetic resources; timber, fuel wood, and construction materials; and oil, natural gas, strategic minerals, sand, and other nonliving natural resources, to name a few. In addition, people increasingly use ocean areas for shipping, security zones, recreation, aquaculture, and even habitation.

There are less well known, yet equally important services that coastal ecosystems provide human communities. Wetlands maintain hydrological balances, recharge freshwater aquifers, prevent erosion, regulate flooding, and buffer land from storms.

In addition to supporting marine capture fisheries valued at more than \$34 billion annually, coastal areas also provide the foundation for the mariculture (marine aquaculture) industry, which uses coastal space or relies on wild stock to produce valuable fisheries products, from tiger prawns to bluefin tuna. Global annual per capita consumption of seafood averages 16 kilograms, and one third of that supply currently comes from aquaculture. Globally, aquaculture is the fastest-growing food-producing sector, with production rates doubling in weight and value from 1989 to 1998.

Continental shelves, meanwhile, account for at least 25% of global primary productivity, 90–95% of the world's marine fish catch, 80% of global carbonate production, 50% of global denitrification, and 90% of global sedimentary mineralization.

Burgeoning population growth and resource use along coastlines attest that individuals value coastal resources, but there is no clear recognition of the value of ecosystem services in these areas. Coastal ecosystems are naturally dynamic, but activities such as dredging waterways, infilling wetlands, constructing ports, building resorts, developing residential areas, and over-fishing are causing unparalleled changes in coastal and marine systems. Sediment transport and changes in hydrology are dramatically altered by land and freshwater use in watersheds, and coastal waters are now considered one of the most highly chemically altered environments in the world.

Overused and undervalued, coasts are near thresholds for healthy functioning, putting coastal populations in danger.

Inadequate conservation of marine ecosystems and their services has its roots in both science and sociology. The goods and services that coastal and marine ecosystems provide are perhaps more complex than that of any other major class of ecosystem. Our scientific understanding of marine ecosystem function lags behind that of terrestrial ecology, and policy makers are uncomfortable with the uncertainties. We are only beginning to recognize and quantify linkages between various sorts of marine habitats, such as the link between intact mangrove and diverse and productive coral reefs many kilometers away. And our understanding of thresholds for stress in various ecosystems remains thin.

At the same time, the “tragedy of the commons” problem in marine environments is not an insignificant one. The common pool resource nature of fish and other resources, and the open access to ocean space, make conceptions about unalienable rights difficult to overcome. In addition, coastal and particularly offshore areas are hard to monitor. Surveillance under the water or far out to sea is prohibitively costly, and modern technology has only presented a few viable tools to address these problems.

Conventional management remains insufficient, and innovative mechanisms that utilize free market or co-management principles have yet to be broadly applied. Few national, state, or local government entities have

access to the information needed to shape policy on market design, and there is little political will to try unconventional approaches in which local communities or the private sector share responsibility for management. Similarly, there is a glaring lack of institutional support and insurance for collecting payments for protection of ecosystem services from the private sector. Coastal management and conservation professionals are not naturally aggregated, lacking global or even regional associations. Information about ecosystem service markets is scarce and the capacity to assess and develop markets is limited. Progress is hampered by lack of understanding and political support from key stakeholders, and the lack of incentives for users to practice good stewardship. As our dependence on coastal goods, services and amenities grows, management will continue to be challenged to describe trade-offs so that reasoned choices can be made.

A survey of how coastal ecosystems are protected shows that innovative financing mechanisms that tap into the private sector are virtually non-existent. With a few exceptions, the protection of these services has generally fallen to the public sector. Government agencies regulate coastal land use, freshwater and wetlands use, maritime activities, resource extraction, and the protection of threatened species and critical habitat. Yet the funds available to manage the coastal zone, both terrestrial and marine, are generally inadequate. While many industries receive an almost free ride in taking advantage of the benefits coastal ecosystems provide, many of these industries face risks as the ecosystem services they depend upon decline. Those industries that depend heavily on the provision of certain coastal and marine services have a vested interest in market mechanisms that support for ecosystem protection.

Despite the challenges facing those working to implement market-based conservation measures in coastal and marine systems, there are significant avenues for investment that can lead to good environmental outcomes. Today there exist few innovative market mechanisms for conservation of biodiversity, flood control, waste processing, fisheries nursery, and other coastal services, with only a handful of investments in privately controlled marine parks, coastal wetlands mitigation banking, and the community-



We are on the brink of developing markets that take advantage of the full range of market-based tools.

based hiring of watchdogs to monitor compliance with regulations. Yet we are on the brink of developing markets that take advantage of the full range of market-based tools, including biodiversity offsets, mitigation banking, protected area establishment tied to fishing vessel buy-back programs, and even cap and trade systems that could propel us towards more effective, and financially sound, coastal conservation. Such market-based conservation will help overcome some of the constraints imposed by conventional management of common pool resources, and will help to build interest in, and stewardship for, coastal services.

Recent natural disasters provide a striking reminder of how very risky it is for us to degrade ecosystems that provide us with essential, though usually greatly undervalued, ecosystem services. Take the role of marshes and other coastal wetlands in buffering land. Recent natural disasters highlighted the folly of destroying coastal habitats, whether they be coral reefs and mangroves in Southeast Asia or barrier islands in the Gulf of Mexico. If there is any good news to emerge from the stories of extreme weather events in recent years, it may be that they have finally awakened us to the inherent values of coastal ecosystem services, at long last providing the impetus we need to better protect them.

Dr. Tundi Agardy is a consultant to Forest Trends, the Coordinating Lead Author for the Coastal Chapter of the Millennium Ecosystem Assessment, and Executive Director of Sound Seas, based in the Washington, DC area.



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Session 3

Watershed Markets: Upstream and Downstream Links

by Sylvia S. Tognetti

Dr. Barton (Buzz) Thompson opened the third session on Thursday with remarks about the opportunities for markets in watersheds. Watersheds, he noted, encompass the full range of ecosystem services and connect users from upstream, downstream and coastal areas. In addition to the clear opportunities watersheds present to those interested in markets for ecosystem services, Thompson acknowledged that they also pose problems. He urged the speakers to explore what new institutional and regulatory structures were needed in order to support the development of watershed service markets.

Responding to the challenge, Al Appleton, former commissioner of the New York City Department of Environmental Protection, stressed the importance of developing mutually supportive arrangements between multiple agencies in a watershed. In other words, Appleton said it was time to move conservation programs toward integrated management.

In the negotiation of the New York City watershed agreement, for instance, Appleton said he began by suspending all regulations except

for a prohibition on the willful discharge of pollutants. Farmers were given a choice between engaging in a new incentive program and suffering the reinstatement of the suspended regulations. Not surprisingly, most chose option A. The program has since obtained a participation rate of over 85%. Appleton said the New York City experience showed that investments in payments for ecosystem services can become a “righteous cycle” in which ecosystem services produce economic and social benefits that can be reinvested back into the environment.

Although ecosystem services generally come in bundles, they tend to be managed one at a time in separate programs with diverse sources of funding. In the Cuyahoga river basin, for example, there are separate payments for water quality protection, wetland restoration and carbon sequestration. Mark Kieser, senior scientist and principal at Kieser & Associates, presented a conservation development strategy for the Cuyahoga basin that was designed to ease pressure on land with high conservation value, reduce pollutant loads and storm water volume, increase groundwater recharge and baseflow, restore habitat, and

increase green space and public trails. The program, said Kieser, also resulted in annual savings of \$USD 1.6 to 5.3 million for 1200 acres.

Importantly, Keiser argued that the program was built around Conservancy Districts (formed in Ohio in response to big floods in the early 20th Century) that have the authority to control land use through tax policies. According to Keiser, these Conservancy Districts could easily become self-financing Ecosystem Service Districts if given a mandate to direct investment into the protection of water.

Bruce Knight reminded the audience of another institution with roots in the early 20th century – the US Natural Resource Conservation Service. Knight also called attention to the upcoming renewal of the US Farm Bill, which will provide an opportunity for public debate over how conservation dollars can be most effectively allocated. In preparation for this, the Secretary of Agriculture has just released a white paper that reviews agency accomplishments in this area. Given the enormous subsidies provided to farmers in OECD countries, the renewal of this bill could have tremendous consequences.

The last two speakers in Thursday’s session on water shifted the conversation back toward local concerns in the Pacific Northwest. Bill Gaffi, general manager of Clean Water Services in Oregon’s Washington County, described the Willamette Basin’s Ecosystem Marketplace. The innovative new program sets up a system through which regulated industries can pay farmers to plant trees that provide shade and cool the river’s water for threatened fish species. The trading system, says Gaffi, provides a way for his agency to direct investment towards areas of higher return and allows industries to comply with regulation at least cost.

Fritz Paulus, executive director of the Oregon Water Trust, stood up last to remind the audience that instream flows are the first factor in water quality. In Oregon, more water rights have been appropriated than there is water available from natural stream flow. Paulus explained how the Oregon Water Trust has begun using tools of the land trust movement to return water to streams, beginning with tributary streams where salmon and steelhead spawn. In some places, Paulus said, farmers are ready to give up the irrigation business in favor of the conservation business.



Session 4

Investing in Green Infrastructure

by Carolyn Kousky

In the last session of the afternoon, the crowd gathered to mull over “Investing in Green Infrastructure.” Moderated by Bettina von Hagen, vice president at Ecotrust, the panel discussed emerging funds and the interest the financial community has in pursuing ecosystem service markets.

The session began with each panelist discussing their fund and how it relied on ecosystem services. The speakers all drew on an analogy mentioned at the outset by von Hagen: that of a wedding cake in which various services are viewed as layers. This is the concept of bundling or stacking.

The President of Ecotrust, Spencer Beebe, began by discussing his organization’s private equity fund that invests in forestry land. Beebe summarized, “we believe we can produce more wood, employ more people, and get vastly better environmental outcomes using an environmental model, layering on ecosystem services.”

David Brand, managing director of New Forests, stayed with the cake theme in the next presentation. Brand explained that New Forests is starting from a perspective that “investors can have their cake and

eat it too.” Premium returns, he said, can be achieved by layering ecosystem service values atop a core return. Noting that rates of return in the forestry sector have fallen in recent years, Brand argued that ecosystem service values could be used to boost these returns.

The good news, according to Bruce Kahn, an investment management consultant with Smith Barney, is that socially responsible investors are beginning to seek out companies that take the kind of proactive approach to the environment described by Brand.

In fact, Kahn created a fund at Smith Barney to do just this and has found that companies that are thinking about their environmental risks and opportunities generate higher returns.

Colin le Duc, partner and head of research at Generation Investment Management, a London-based company that is only two years old, echoed this idea. He told the audience that their “fundamental investment philosophy says companies that are addressing the world’s biggest problems will outperform.” Their notion “is to pull together a group of people who are professional mainstream Wall Street investors with those people

who understand sustainability.”

The discussion then turned to a more landscape-level approach. Along with Environmental Banc and Exchange, Fred Danforth has

After discussion prompted by questions from the moderator and audience members, it appears there are two optimistic takeaways from this session and two notes of caution.

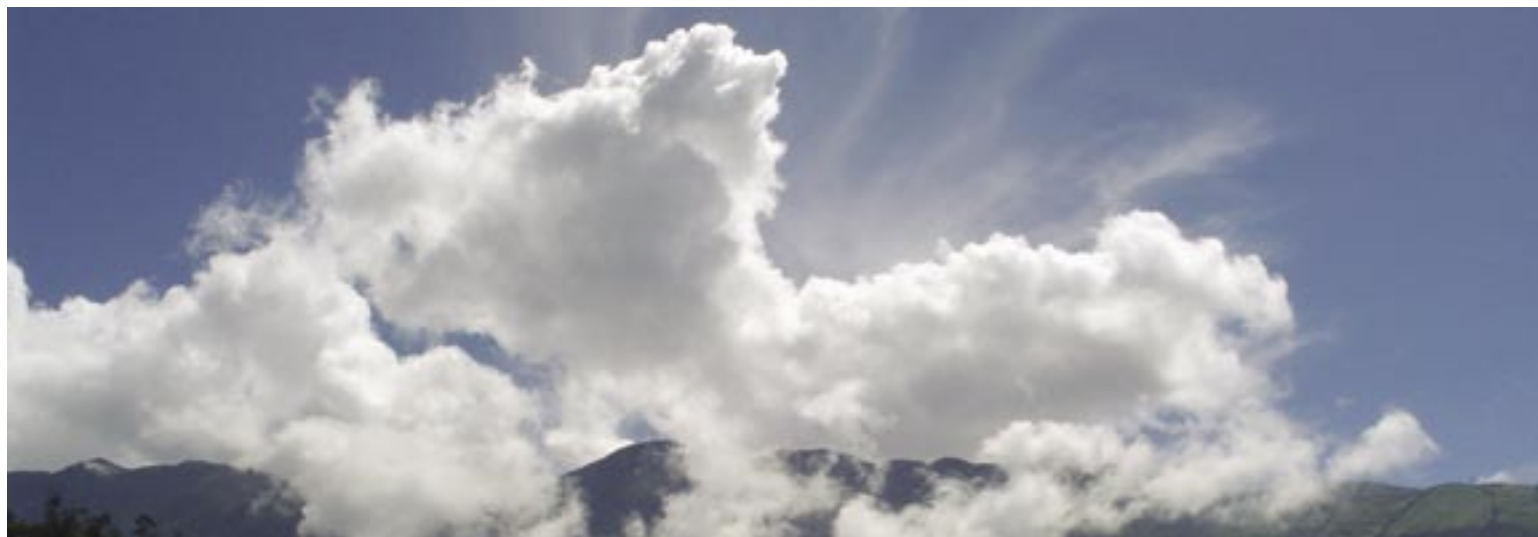


established a private equity group called the Sustainable Land Fund (SLF). SLF is currently building a portfolio of properties that generate value through the ecosystem services they produce.

John E. Earhart, chairman of the Global Environment Fund, took the podium after Danforth to conclude the session. Earhart’s 17-year old private investment group has recently started a new fund focused on local forestry investments in places like Brazil, Argentina, India, and South Africa. They, too, look at ecosystem services as added value – icing on the cake.

The optimistic conclusions are that funds based on an ecosystem service strategy might outperform the market, and that an ecosystem services strategy need not come at the expense of jobs.

The notes of caution are first, that mainstream financial analysts are unlikely to incorporate ecosystem services into their projections unless they are spoon-fed metrics they can plug into financial models. Second, ecosystem service markets are unlikely to get the attention of Wall Street until they are larger and more stable. But all agreed that day will come.



Katoomba Dialogue

A Look at the Sky Trust

by Andrew Bell

The sky is a gift of the creator to all of us and to the future. Each generation has a moral, "fiduciary" responsibility to pass these gifts on undiminished to those that come after.

Peter Barnes is the author of "Who owns the sky?" and the Sky Trust is his brainchild. He envisions a trust that owns the rights to emissions in the sky, of which every person is a beneficiary. No one can trade their share in the Sky Trust, but everyone shares in the dividends the Trust generates.

Where do the dividends come from? They are derived from the auctioning of permits to emit. In Barnes view, at least half of these dividends should be paid back to the shareholders, and the remaining dividends invested in things like clean energy programs.

Barnes thinks this idea is a better approach to tackling atmospheric pollution and climate change than the things we have tried already. The Katoomba Dialogue heard the views of six panelists, including Barnes, on property rights and ownership, and how an idea like Sky Trust can help tackle the climate problem.

David Brand: The first President Bush once said, "the American way of life is not negotiable." Brand feels that this idea of contract and converge, moving toward a system where everyone has the same right to emit, isn't going to happen, based on reactions to the Kyoto Protocol. In his view, there isn't incentive for people who are over-emitters to become under-emitters.

Terry Williams: A part of the sky falls too in the zone of indigenous tribes. These people are more connected to the sky *spiritually*, rather

than by any idea of a Trust. Europe brought the concept of property rights around the world. Says Williams, the tribes never really believed in it. For them it took only a look at the landscape for these indigenous people to know they had to take care of it.

Dennis Martinez: There is a problem in the use of the word "ownership." Martinez points out that among indigenous people the idea of ownership is more than rights and privileges, it also carries a sense of *responsibility*. Historically, Martinez says that land was held in stewardship, and if a group used it, it was taken care of by the group. Using that broader definition of ownership, it can't be said that any of us really *own* much anymore.

Pati Ruiz: All of [us, the conference members] are being *arrogant*. The topic of this meeting has been ecosystem services – carbon sequestration, water purification – but to Ruiz, these are only the most basic of ecosystem services. "What about the unknown?" she asks. The anthropocentric worldview that men are "the only reason of the universe" ignores so much value and so many services that the earth provides to other beings. Ruiz tackles conservation from the bottom-up in communities of

extreme poverty. After 8 years of trying to make ideas like carbon emissions trading work at that level, she came to understand that it just wasn't possible to fight rural poverty and attract buyers from the regulated carbon market.

Kerry ten Kate: There have been 10 years of fraught legal debate surrounding the Convention on Biodiversity, and only now are we beginning to talk about ecosystem services. In order to move forward in the area of property rights, Ten Kate says we need clarity and simplicity. Pointing to Australia (where there are 44 separate jurisdictions over genetic resources and indigenous knowledge) and China (where there exist 12 ministries for property rights, not one of which will take authority), she says governments need to come up with a more streamlined approach.

But what did ten Kate feel about the future of The Sky Trust? "I'm not a ten-minute girl!" she quipped. Indeed, the short dialogue certainly did not provide enough time to weigh an idea like Barnes' fully. Ruiz may have summarized the session best when she said to Barnes with sincerity: "I don't understand the idea really well, but I'll tell you something, *"KEEP DREAMING!"*



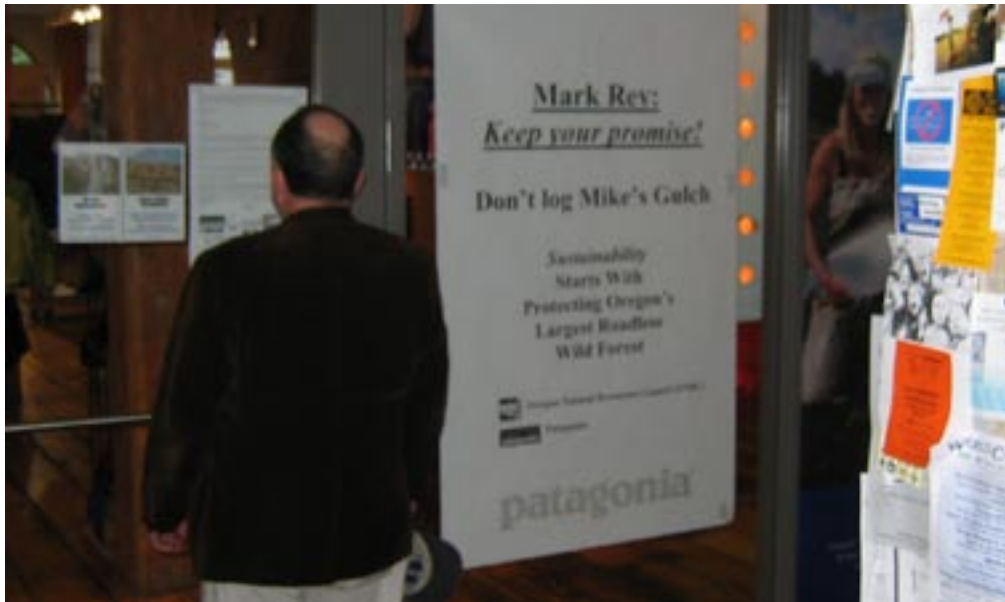
Photo Gallery



Fritz Paulus, the Executive Director of the Oregon Water Trust, enlightens the crowd.



Emma Stewart of BSR looks like she is plotting mischief on her cell phone.



A little controversy can be healthy.



Molly Loughney and Carina Bracer – both of Forest Trends – smile for the camera.



The recently restored Ecotrust building exhibits both style and substance in the Pearl District.

Our quick reminder to you: Stop and smell the roses before you leave Portland!

Agenda for Today (Friday, June 9, 2006)

Workshops run concurrently at the Jean Vollum Natural Capital Center.

8:00-9:00 AM Breakfast

9:00-12:00 PM

Water Quality Markets & Practice: The Willamette Basin

Bruce Knight, Chief, Natural Resources Conservation Service

Mark S. Kieser, Senior Scientist and Principal, Kieser & Associates, LLC

Albert F. Appleton, Senior Fellow, City University of New York Institute for Urban Systems

David Primozych, Director, Willamette Partnership

Sara Vickerman, Senior Director, Biodiversity Partnership, Defenders of Wildlife

Jeremy Sokulsky, President, Environmental Incentives

Dr. Barton ("Buzz") Thompson, Director, Woods Institute for the Environment at Stanford University

*Moderator
Bettina von Hagen, Vice President, Forestry & Natural Capital Fund, Ecotrust*

9:00-12:00 PM Biodiversity Offsets Markets and Practice: Salmon Offsets?

Kerry ten Kate, Director of Investor Responsibility, Insight Investment

Craig Denisoff, Founding Partner, Environmental Business Partners

Jessica Fox, Director, Eco-Assets Program, EPRI Solutions

Mark Eigenraam, Principal Economist, Economics and Policy Research Branch, Department of Primary Industries

Dan Spethmann, Leader of New Business Development, Temple-Inland

Preston Hardison, Watershed Policy Analyst, Tulalip Tribes

Kevin Halsey, Regulatory Specialist, Parametrix

Jim Shields, Wildlife Manager, Forests NSW, Australia

*Moderator
Jim Salzman, Professor, Duke Law School and Nicholas School of Environment and Earth Sciences*

12:00-1:00 PM Lunch

Please patronize one of the many fine dining establishments in the area.

1:00-4:00 PM Carbon Markets & Practice: West Coast Initiative & Biomass Opportunities

Mark C. Trexler, President, Trexler Climate + Energy Services, Inc.

Mike Burnett, Executive Director, The Climate Trust

Catherine M. Mater, President, Mater Engineering, Ltd.

Radha Kuppalli, Manager, Business Development, New Forests

Michelle Passero, Director of Policy Initiatives, Pacific Forest Trust

*Moderator
Ricardo Bayon, Director, Ecosystem Marketplace*

1:00-4:00 PM Coastal & Marine Markets & Practice

Edward Backus, Vice President, Fisheries, Ecotrust

Astrid Scholz, Vice President, Knowledge Systems, Ecotrust

Matthew A. Wilson, Principal Partner, Spatial Informatics Group (SIG)

Bruce M. Kahn, Investment Management Consultant, Smith Barney

Robert Repetto, Professor, Economics & Sustainable Development, Yale School of Forestry

Chuck Cook, Director, Coastal and Marine Program, California Nature Conservancy,

Judith Kildow, Principal Investigator and Director, National Ocean Economics

*Moderator
Tundi Agardy, Executive Director, Sound Seas*

4:00 PM Conference Close

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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"Go straight until you get to the Body Shop. Then there's a path to the right that leads to the Gap. A little farther along, just past the Limited, there's a clearing. Victoria's Secret is right there."