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Ecosystems for Sale in an Unequal World

Breakout Session 3 A of Global Synthesis Workshop on Markets, business and the environment – Strengthening corporate social responsibility, law and policy

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1. What are Markets for Ecosystem Services?

Michael Jenkins, Forest Trends and the Katoomba Group

New finance mechanisms and approaches to conservation are necessary. Key points:

- The model of public finance for conservation is facing a crisis - e.g., ODA support overall is down 50% and environment has fallen off the agenda of development agencies.
- 10% of forests are set aside in some sort of protected area but this only represents 10% of biodiversity conservation globally, all of which is vulnerable to a shift of climate. In addition, 1 billion people - the poorest of the poor and the most dependent on biodiversity to support livelihoods - are living in biodiversity hotpots. However, the predominant model of conservation remains one of exclusion.
- A landscape strategy is needed for conservation, that places protected areas in context of a broader matrix of compatible uses.
- Payment schemes can help to move beyond the hotspot model towards a landscape model. If correctly designed, benefits can flow back to low income communities, which are the first line of defense against habitat destruction.

2. Carbon Payments for Biodiversity Conservation,

Moderator: John Niles, Climate Biodiversity Alliance

Katherine Shanks, BP Vice President of External Relations for the Environment: The Buyer's Approach to Carbon Payments

After Kyoto, BP set and met a target of keeping operational emissions 10% below 1990 levels through 2012. They also made a commitment to maintain the target as business doubled by concentrating on consumption of their products, and looking for the potential for greater efficiencies in the value chain of use. In addition, they are participating in forestry projects that have multiple benefits of carbon storage and promotion of biodiversity. However, these contributions are not counted towards meeting their target for reducing operational emissions, so as to avoid charges of green-washing. With respect to the future, they are looking for opportunities to invest in lower carbon technologies and new kinds of businesses involving greater use of natural gas, solar, wind and biomass, that will be necessary to achieve stabilization of carbon concentration consistent with targets.

The main motivation has been that carbon emissions present a potentially significant risk, that they need to take actions consistent with the level of social concern that is perceived, and that it is a good business investment. They are also investing in universities around the world to deepen understanding. Among studies they have supported is one by Princeton University that identifies a business model and the kinds of business BP can invest in that are consistent with stabilization at concentration targets, which it demonstrates is possible.

James Gasana, InterCooperation/SECO: Selling Carbon Services: A View from the San Nicolas Project in Colombia

This project is testing a methodology for financing long term sustainable management of forests. The project is located in the watershed area for 2 hydroelectric dams that supply 30% of the nation's energy, of which 90% of the land area is privately owned, primarily by small farmers in plots of less than 5 ha. To date, 30,000 ha have been declared conservation areas, 24,000 ha as land suited to forest production, 10,000 families are benefiting from the project, and water payments are already in place. Results include a management plan with CDM and non CDM components, an investment and financing plan, and the promotion of social and institutional alliances to facilitate implementation. Monitoring and verification is an important component.

Multiple instruments are used to promote multiple services which include sustainably grown timber, non-timber forest products, agriculture and agroforestry crops, and environmental services that include carbon, biodiversity and soil conservation. Financial instruments used include: certified emissions reductions (Kyoto eligible), verified emission reductions (Kyoto non-eligible), and environmental shares. A trust fund was established which is managed by the Corporation MasBosques – a stakeholder entity created for the purpose. Investors in environmental shares receive social recognition that can be used to improve their corporate image and improve relationships with the local communities. Kyoto eligible emission reductions are achieved through silvopastoral systems, forest plantations and agroforestry systems. Voluntary markets, based on non-Kyoto eligible activities, are based on forest conservation, restoration with native species, and harvesting and processing of NTFPs. Given that it exists in a troubled area (i.e., in a civil war), another key aspect was the conduct of educational activities needed to insure that it is well understood by farmers in phase 1, so they could participate in phase 2.

3. Watershed Payments and Biodiversity

Moderator: Adam Davis, Solano Partners

Gerardo Segura, CONAFOR (Comisión Nacional Forestal, Mexico): Public Payments for Watershed Services in Mexico

Objectives of Mexico's program are to:

- protect hydraulic services with temporary payments
- induce the development of sound market arrangements for PES between providers and consumers of hydraulic services at local watershed levels

In 2004, Congress approved US$87 million to expand the program to include payments for: carbon sequestration, biodiversity, and agroforestry

Payment amounts are based on the operational costs of agriculture and cattle raising – for cloud forests: US$35 ha; for other tropical and temperate forest areas: $26. As of 2003, there have been 271 applications, protecting a total area 126,817.97 ha (3,546.09 Cloud forest, 123,271.88 tropical & temperate forest). The total amount paid has been US$38,400,000. The total of payments expected to be made over a 5 year period is US$192,000,000. External funds of $95 million have been obtained to support the program: $15 million from GEF, $52 million from the World Bank, and $28 million from the government as a counterpart.

Under the criteria for selecting priority watersheds, 3,836, 322 ha are eligible for inclusion. It is estimated that this can be reached over a period of 19 years with an investment of US$ 600 million. These criteria are:

- Criteria for selecting priority watersheds:
- Proximity to overexploited aquifers;
- Forest cover > 80%;
- Water supply for urban areas of > 5000 inhabitants;
- Proximity to national Protected Areas;
- In critical habitats for biodiversity;
- In areas of high illegal logging; and
- Proximity to important mountainous systems.

Landowner Eligibility criteria are:

- at least 80% of land under forest cover;
- proposed area > 50, < 4000 ha;
- areas to be protected are within forest management units of < 200 ha;
- proposed areas are free of boundary conflicts;
- communal general assemblies have agreed to participate.

Initial indirect benefits for communities have been:

- investments to improve forest management operations;
- investment in FSC forest certification;
- development of alternative use projects (e.g., ecotourism, NTFPs, water bottling plants);
- creation of community reserves that reduce the intensity of logging operation and protect forest habitats, and
- local recognition of environmental forest values;

Al Appleton, Regional Planning Authority, New York: Developing Large Scale Ecosystem Payment Systems through Urban Rural Partnerships: Reflections on New York's Experience and China's Potential

The agreement made between the state and farm communities, and the process of negotiating the agreement, which took a year. The farmers had wanted their participation in the program to be entirely voluntary. Given that this approach only gets participation from "the good guys", it was a non-starter. So, the deal finally made was that farmers would run the program and develop whole farm plans that would be integrated into farm business plans, and that it would be voluntary for individual farmers. However, there would be a return to traditional regulation if collectively, 85% of farms failed to sign up within 5 years. The requirement was met and non-point source emissions went down. Today it all seems straightforward but back then they were regarded as mavericks.

Regulation was replaced by a partnership based on mutual self-interest. All regulations were thrown out except the ban on willful pollution. The goal was to achieve the critical mass needed to protect the landscape rather than protect individual tracts. They do not seek to optimize for individual problems but these can be addressed later if necessary.

China has created an economic miracle to which the only parallels are Renaissance Italy and 19th century England, but the environment has suffered from the massive entrepreneurial activity. China has embraced concepts of environment and sustainability at an early stage of development but improvements have only been in the urban areas, while rural areas have gotten worse. Therefore, massive intervention is needed. A problem with efforts aimed at forestry and tree planting is that they are not rooted in communities.

He commented that scientists have been difficult to work with because policy is about values, in contrast with science, which is about saying what can be done. It is also difficult to get a straight answer from them. Communities are as right and wrong as everybody else, but are real people, with lives just as complicated. He summed up the dilemma as one of: "Pay your money, take your chances."

4. Direct Payments for Habitat and Species Conservation

Moderator: Carlos Young, Universidade Federal do Rio de Janeiro

Dave Shelton, CSIRO - Direct Payment for Habitat in Australia

This program, in New South Wales, emerged because the previous approach, of placing restrictions on land clearing, was inadequate. The advantage of well-designed Market-Based Instruments (MBIs) is that they are outcome focused and flexible thereby allowing for innovation. They also allow for heterogeneity, can lead to greater total positive change compared to alternatives, and are potentially more self sustaining over a longer period of time. In this program, the auctioning of land management contracts resulted in conservation of 25% more native vegetation compared to fixed price approaches and grant schemes.

He then discussed the problem of trying to use them to achieve multiple outcomes, which is more complex and therefore more uncertain. Actions available to meet different targets do not always coincide and have different costs and outcomes. 3 levels of heterogeneity need to be considered: biophysical, management, and socioeconomic.

General conclusions and warnings:

- The overlap of hotspots and management actions can provide multiple benefits but will also require greater specificity of actions and site location. Single outcome markets provide greater freedom of action and site location.
- There is not always a win-win solution
- Bundled markets are not always possible - desirable correlations are often weak or non-existent (e.g., biodiversity and salinity)
- It is difficult to define property rights when dealing with a single species.
- What is the product, really???
- Beware of Transaction Costs in thin markets.
- Beware of the inappropriate inclusion of multiple outcomes.

Website : www.ecosystemservicesproject.org.au

Ken Chomitz, The World Bank: Using Payments to Catalyze Biological Corridors

The objective of creating a corridor is to get landscape level properties from fragments. Policies can be judged by 2 general criteria:

- Is it implementable? Is there agreement?
- Is it ecologically effective?

Top down corridor planning is ecologically effective but is not socially acceptable. Therefore, emphasis is placed on a decentralized response to environmental payments, in which stakeholders voluntarily decide to participate or not, which is transparent, and land has a low opportunity cost.

TAMARIN, a simulation model, was developed and run for the Atlantic rain forest in Brazil. It is modeled on the US Conservation Reserve Program, in which payments are based on an auction system and points for habitat quality, landholders offer land at their opportunity cost, offers are ranked by cost effectiveness, and results are evaluated for budgets between R$20 to R$200 million (1 US$ = approximately 3 Brazilian R$).

The land use map shows high fragmentation, extraordinary endemism, low forest cover, and high agricultural production. Land values are low overall – this is related to soil quality, flatness, and road access, and is negatively related to forest cover. Forest cover therefore has a strong spatial pattern. Simulation results suggest that 10,000 continuous ha are necessary for viability.

Under the baseline scenario, with no policy result, forests are only found in Protected Areas. Conclusions drawn from the model are that, with a budget of R$80 million, 12 viable fragments could be obtained in 5 bioregions. With increases in program budgets, better habitat quality can be obtained in larger fragments.

Whether these results can be generalized depends on whether habitat is spatially clumped, and whether it is associated with relatively low land values - a situation possibly typical of many biodiversity hotspots. In this case, there is a relationship between biological conservation value and market value which is critical to how the use of instruments plays out and whether they achieve goals or not.

5. Biodiversity Offsets, Mitigation and Compensation

Moderator: Ricardo Bayon, Managing Editor of the Ecosystem Marketplace

Wayne White – Field Supervisor, US Fish and Wildlife Service Sacramento Office - Conservation Banking: Lessons from California and Implications for Global Conservation.

As background, California has the 5th largest economy in the world, population growth of 1/2 million people a year, and a rate of urbanization of 50 square miles/yr. It is also rich in biodiversity, containing: 308 federally protected species -1 in 5 of endangered species in the US exist in California; 232 state protected species, and 69 listed species.

A conservation bank is a checking account of land that can be drawn upon to compensate for adverse effects in the general area, through protection and/or restoration and/or creation of habitat. The principal advantage is that it allows protected areas to be planned for and concentrated in one place so as to achieve critical mass. It is an attractive incentive for landowners but needs a long term structure for management, monitoring and funding.

Rules of the road:

To achieve success it is essential to invest management resources up front, to support:

- solid control of the property,
- science based management plan for species and habitats,
- operation and maintenance plan, and
- adequate funding (a permanent endowment).

Requirements:

- A biological assessment - does a site qualify?
- A market survey to assess demand , and

- Economic considerations that make sense.

Kerry ten Kate – Insight Investment: The Onset of Offsets

Insight is the asset manager for Halifax Bank of Scotland (HBOS) and manages 72.5 billion pounds, applying a policy on corporate governance and corporate responsibility. Under this policy, companies are encouraged to adopt high social, environmental and ethical standards.

Biodiversity is among the selected issues that pose business risks and opportunities. Oil and gas, mining and minerals and utilities companies all need access to new sites every 20-30 years, and need better practices to secure an operating license. Some highlights were presented from a report on biodiversity offsets published jointly with IUCN, based on interviews regarding company experience in this area.

Biodiversity offsets are actions taken to compensate residual unavoidable damage. They are not a substitute for "no go" areas – they require agreement that there is a net gain. Not all precedent is encouraging and further dialogue is needed.

There are corporate policies that commit to positive impacts, motivated by legal requirements and the business case that can be made for voluntary offsets.

Potential conservation benefits are: more conservation than occurs now, better outcomes through a focus on high value habitat and conservation priorities, a mechanism to integrate conservation into development planning and biodiversity into investment plans.

It is important to evaluate offsets case by case and to maintain flexibility.

There are risks inherent in doing them the wrong way. Stakeholder consultation and interdisciplinary input is needed to develop methodologies and guidelines, and test pilot projects so as to identify best practices.

A key linchpin of offsets is establishing ecological equivalence - a regional conservation plan is needed as a measuring stick, to keep a tally on biodiversity.

Offsets are at turning point – there is greater interest and practical experience. Trade-offs are being transcended but efforts are mostly ad hoc.

A new social contract is emerging - access to land and sea is becoming conditional on best biodiversity practices - companies will need to demonstrate they are making a positive contribution.

Panel discussion:

Adam Davis commented that conservation banks offer a high degree of certainty – biodiversity is commodified, the costs can be lowered, the amount a particular habitat is selling for is known, and there are specific known legal requirements for developers. Key questions are, to what extent are these lessons more generally applicable? How difficult is it to establish the currency? Who is keeping the biological tally and how?

WW: In California, they are able to compare similar habitats that have different costs because they are in different locations. Conservation banks are affecting the economy of California and housing prices. Banks can do it at a lower cost than developers because they are doing it on a larger scale.

KtK: There are successes and problems, such as issues around timelines. To replicate the approach it is necessary to have jurisdictions willing to regulate, and policy frameworks. But they can and are being applied lessons in a less regulated format. Many feel the approach would not work voluntarily in the US. Elsewhere, people believe it would work voluntarily. A regional conservation plan is needed as a measuring stick.

Jim Salzman commented that experience with wetland mitigation banking in the US shows that compliance monitoring is essential - a shocking percentage of these fail within a year and there is pressure on agencies to restore where land is cheap and services are not needed.

Mark Miller commented that there is a danger of taking the offset idea too far – is it an excuse to eat into irreplaceable ecosystems?

KtK: Offsets would not achieve their goals if they were done that way. The basis for optimism is that there is built in encouragement to do the right thing. However, more community engagement and clarity of rules from government is necessary. It is important to make the business case, and also be able to answer the tricky questions. Business needs to hear that there is public support for it.

In response to a question from Gerardo Segura regarding responsibility for long-term management of offset sites, Wayne White pointed out that an endowment is set up to provide yearly amount needed to cover management that has been agreed to.

Closing comment: What is the service? To who is it delivered? This is not yet clear or entirely settled.

6. Panel Discussion: Ensuring Equity in Ecosystem Service Markets

Moderator: Herman Rosa, Programa Salvadoreño de Investigación sobre Desarollo y Medio Ambiente (PRISMA)

Meine van Noordwijk, (in place of Fiona Chandler, World Agroforestry Center), RUPES (Rewarding Upland Poor for Environmental Services): Watershed Payments to Upland Communities in South Asia

Key issues in watershed payments are to identify who is paying who to do what and where. Defining services is complex as their provision may depend on what people do or don't do, and the absence of threats. "Watershed functions" is a nice word but represents a complex concept that is a source of confusion. There has been too much focus on trees in popular discourse as well as in government reforestation programs. There is also confusion regarding the role of markets and payments. Given the public goods characteristics of watershed services, which imply the need for collective action, there are problems with standard market assumptions. Compounding the difficulty is that there is not a consistent relationship between what people do and what services are provided. If one asks what the main problem is among those upstream, who provide services, it is lack of tenure. Poverty is, above all, a lack of recognition. By law, upland dwellers often should not be there at all. Payments also raise moral and legal issues as to activities that should not be allowed for anyone – baselines are shifting. A key question therefore is how funds can be better targeted.

These issues were illustrated with the case of Lake Singkarqak, the site of the Paningahan-Nagari project, in which the hydroelectric company pays 100 k /year to the local government. However, it is not clear why the payment is made – perhaps public relations, how it should be spent, and the extent to which it can simply be considered a tax paid to the local government for its discretionary use. Lake fluctuation did increase from pre to post HEPP, but it is also sensitive to small changes in climate.

In general, there is good local knowledge of surface processes, but not about soil and infiltration processes. Coffee gardens are probably as good as natural forests in this area, so there is no need to protect forests, allows people to make a living

There is no market relationship between the payment and system performance. It is about a relationship of trust among buyers & sellers. In conclusion, the paradigm is shifting from one of conflict/rules and inequity/rewards to trust, accountability, and shared responsibility.

Maryanne Grieg-Gran, IIED: Potential Pitfalls in Addressing Equity

Different definitions of equity imply different questions:

- Equality of opportunity - Who gets access, what are obstacles to participation – what are the rules?
- Equality of outcome – Are the poor equally likely to benefit as the rich? Both financial and non financial impacts need to be considered - the sustainable livelihoods framework provides a checklist.
- Positive discrimination – are schemes designed to provide greater benefits to the rich?
- Process - do poor participate in the design of the scheme?

An initial global review showed little evidence that environmental service payments are having an impact on poverty. More recent case studies have been carried out in: Virilla, Huetar Norte, Ilha do Bananal, Plantar, Peugeot, Noel Kempff Mercado Climate Action Project; Pimampiro, and Profafor - mostly involving carbon.

There is little information on access of smallholders except the Profafor project, where 30% of contracts are with communities. Rules on landholding size are not unfavorable to smallholders (in the Costa Rica PES and PROFAFOR case studies). However, in the Costa Rica/Virilla case study, it was found that payments go to those better off. There are other rules that create obstacles to greater participation of the poor. In Costa Rica, land tenure is a constraint because formal title is required to participate. Other case studies (e.g., Pimampiro, and Noel Kempff) show that ES payments can have a positive impact when securing tenure is part of the package. PES contracts may lead to greater perceived security. In conclusion, evidence is too mixed to reject MES on equity grounds – the diversity of case studies shows that impacts are context and design dependent.

Financial benefits include: a significant effect on cash incomes – in Pimampiro payments average 30% of household income, and diversification – by enabling new activity at the farm level (in Huetar Norte, and Profafor).

Concerns include uncertainty regarding long term benefits – e.g., in Profafor, the sale of mature timber is some years ahead, and lack of knowledge regarding operational costs. Transaction costs amount to 12-18% of payments in Costa Rica. A significant cost is the need to leave land idle while the application is in process, travel costs and time to obtain documents.

Recommendations:

- facilitate access of smallholders to MES schemes
- Reconsider tenure rules and contract periods
- Adapt rules on land and resource use to local contexts and land use practices
- Simplify procedures to reduce transaction costs
- Improve coordination with land reform processes to promote provision of environmental services as a land use option

To ensure sustained and willing participation it is necessary to provide better information regarding options and financial implications of land uses, and build capacity for any new activities that are involved. Indirect participation of smallholders in carbon projects can be encouraged through partnerships and outgrower arrangements.

Website: IIED reports on markets for environmental services can be found at: http://www.iied.org/eep/pubs/MarketsforEnvironmentalServicesseries.html

7. Interactive Conversation: Threats, opportunities and next steps

Moderators:

Jim Salzman, Nicholas School of the Environment and Earth Sciences, Duke University; and

Eugene Linden, Penguin Putnam Publishers

Salzman – The political context is important because governments play a key enabling role, and because "when the U.S. sneezes, the rest of world gets a cold."

Linden discussed the implications of the recent U.S. elections for environmental action. The election was not a referendum on the environment or on Bush's environmental policies. If it had been, and had Bush won in a landslide, we would have a worst case scenario. But the outcome will be profoundly important going forward. Kerry made a mistake by not making more of an issue of the environment, but the issue doesn't poll well and it is hard to get pro-environment international action even in good times, even with pro-environmental politicians in office. Powell was able to do certain things in Liberia because it is a place no one cares about. Kyoto may help to get funding into key areas, and the issue of environmental markets may have a certain kind of appeal – they could be the best hope for protecting the low diversity forests that are important to the conservation of high diversity forests..