CONVERT NATURAL RESOURCE LIABILITIES INTO BUSINESS ASSETS

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Abstract

Market-based approaches to managing natural resources are becoming increasingly popular. In contrast to traditional command-and-control approaches, federal agencies are shifting to incentive-based structures where landowners are rewarded for activities that support vital ecosystem services such as clean water, clean air, healthy habitat, and biodiversity. Now, instead of tracking down and punishing those who do not comply with federal laws, government agencies are sitting at the same table with business managers to sign mutually beneficial land-management agreements.

Consensus for this approach has solidified in the past few years; recently, the Millennium Ecosystem Assessment, an international effort by nearly 1,400 scientists to determine human impacts on the environment, expressed encouragement for market-based systems as one tool for “taking nature’s value into account” and achieving a more sustainable future (Millennium Ecosystem Assessment, Statement from the Board. Living Beyond Our Means: Natural Assets and Human Well-being. March 2005 (available at http://www.maweb.org/en/products.aspx).

Market-based strategies enable landowners to buy and sell ‘credits’ for conserving ecological features such as wetlands, endangered species habitat, water-quality reduction (nutrients, oxygen, turbidity, etc.), carbon sequestration, and mercury reductions (specific to electric utilities). These credits that represent natural-resource values are banked for internal use or sold on the open market.

In its most common application, a property owner agrees to preclude development on a sensitive tract of land in exchange for a cash payment. Under government-sanctioned guidelines, the property owner then collects payments from companies who need mitigation for impacting sensitive land elsewhere. EPRI Solutions has found that new niche markets have resulted in valuations of up to $125,000 per acre for land that supports rare plant and animal species (Fox, J. and Nino-Murcia 2005), up to $250,000 for an acre of wetland (Fox, personal communication), and over $25 for a ton of carbon in European markets (Carbon Finance Magazine). In this way, ecological resources are converted into financial assets, increasingly referred to as “eco-assets.” A summary of eco-asset types and their regulatory instruments is presented in Table 1.

Table 1. Eco-Asset Credit Types

<table>
<thead>
<tr>
<th>Eco-Asset Credits</th>
<th>Federal Guidance/Policy Generating Credits</th>
<th>Year Guidance/Policy Released</th>
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<tbody>
<tr>
<td>Wetlands</td>
<td>Mitigation Banking</td>
<td>1995</td>
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<tr>
<td>Endangered Species</td>
<td>Conservation Banking</td>
<td>1995 CA /2003 Federal</td>
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<tr>
<td>Water Quality</td>
<td>Water-Quality Trading</td>
<td>2003</td>
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<tr>
<td>Mercury</td>
<td>Clean Air Mercury Rule</td>
<td>March 15, 2005</td>
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<tr>
<td>Carbon Emissions</td>
<td>Pending in the U.S.</td>
<td>Pending in the U.S.</td>
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While the federal government determines the number of credits granted, the competitive market sets the price. Credits can be used or sold in order to comply with mitigation requirements of U.S. federal environmental laws, including the Clean Water Act, Clean Air Act, and the Endangered Species Act. The system is attractive to landowners, developers, and biologists because it is simple, cost-effective, and ecologically more promising than other mitigation options. Many of the first-generation banks are owned by for-profit organizations, established for financial motives rather than driven by environmental activism. Consequently, these approaches foretell a solution to the historically intractable conflicts between business profitability and environmental concerns.
There are several business benefits for engaging in market-based strategies and developing eco-assets on corporate property. These include:

- Reducing environmental-compliance costs by applying natural resource values on surplus land towards internal mitigation needs
- Increasing revenues either from selling eco-assets credits or the lands that underlie these assets based on their eco-asset value
- Improving public relations by taking steps to protect natural resources on corporate lands

There may also be opportunities to reduce corporate taxes by utilizing those portions of federal and state tax codes that provide substantial tax benefits to companies who donate assets to qualifying non-profit organizations or public agencies. While this approach has been used, it is generally less common than the benefits listed above.

Currently, there are about 300 wetland banks, 75 endangered species banks, and an active international market for carbon credits with the Chicago Climate Exchange already facilitating trading in the United States. Several business sectors are actively utilizing wetland and endangered-species banking. For example, departments of transportation have already banked more than 44,000 acres of wetlands in the United States (Extracted from Banks and Fees 2003). Eighteen different DOTs are active in wetland mitigation banking, with an additional six having established endangered species credits.

The pulp and paper industry is also enjoying business benefits from market-based approaches. In contrast, electric utilities and oil and gas companies have been slow to engage. As of 2002, electric utilities had established three wetland banks covering 4,263 acres (Table 2) and only one conservation bank covering 101 acres for the Coastal California gnatcatcher owned by Southern California Edison (Fox and Nino-Murcia 2005). With federal guidance only recently released for water quality trading and mercury trading, and carbon trading still awaiting official U.S. sanctions, these markets are less established across all business sectors, compared to wetland and endangered species banking.

Table 2. Wetland Banks Owned by Electric Utilities (Banks and Fees 2002)

<table>
<thead>
<tr>
<th>Bank Name</th>
<th>Year Established</th>
<th>Total Acreage</th>
<th>Bank Sponsor</th>
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<tbody>
<tr>
<td>Everglades Mitigation Bank-Phase I</td>
<td>1996</td>
<td>4215</td>
<td>Florida Power and Light Company</td>
</tr>
<tr>
<td>Ohio Edison Grand River</td>
<td>1996</td>
<td>42</td>
<td>Ohio Edison Company, subsidiary of First Energy</td>
</tr>
<tr>
<td>ODEC-Virginia Power Wetland Mitigation Bank</td>
<td>1997</td>
<td>6</td>
<td>Old Dominion Electric Cooperative</td>
</tr>
</tbody>
</table>

Factors limiting participation by some industries include uncertainties related to using eco-asset credits to address mitigation needs, concern over the ‘thinness’ of markets, lack of knowledge of opportunities, and concerns about revealing ownership of natural resources that have traditionally been considered legal liabilities. Many of these issues are tractable and when resolved, will likely lead to an influx into the eco-asset markets.

To support market-based environmental practices for electric utilities and other companies, EPRI Solutions has launched a new program called the Eco-Asset Strategic Service. This information service helps companies understand the benefits of market-based environmental protection, an approach that is expected to grow significantly over the next five years. As one of the first deliverables of the Strategic Service, EPRI Solutions is organizing the first multi-industry eco-asset workshop to discuss hurdles, opportunities, and successes in utilizing market-based approaches. The event will bring together businesses, federal agencies, and environmental groups to hear case studies, recent research, and brainstorm on how to integrate eco-asset opportunities into primary corporate goals. We will identify synergies and collaborative opportunities between at least four industries – electric utilities, transportation, oil and gas, and pulp and paper. The Ecological Assets in Business Workshop will be held in Palo Alto, CA, on March 13 and 14, 2006. Visit www.eprisolutions.com/eco-assets for up-to-date information.

Biographical Sketch: Jessica Fox is a certified Associate Ecologist by the Ecological Society of America with a master’s degree in conservation biology from Stanford University. She is currently a senior scientist at EPRI Solutions Inc. in Palo Alto, California providing financially attractive solutions for protecting natural resources on corporate property. She has conducted benchmark research in conservation banking and published multiple peer-reviewed articles on the subject of market-based natural resources protection. She frequently presents her academic and practical experience with market mechanisms for ecosystem protection.
References