



BSR Conference 2009

**Reset Economy. Reset World.**

## The Economics of Biodiversity

Breakout Session Summary

Friday, October 23, 2009 | 10:15-11:30 a.m.

### Speakers

- » **Edward B. Barbier**, John S. Bugas Professor of Economics, University of Wyoming
- » **Diane Osgood**, Vice President, CSR Strategy, BSR (moderator)

### Highlights

- » We need to take a systems approach instead of focusing only on individual parts such as carbon offsets.
- » Finding a solution with require collaboration.
- » This is an emerging field and will take time to develop. If business is not involved in the creation of the solutions, it will not succeed.

### Memorable Quotes

*"Biodiversity is the insurance that nature puts in place to protect systems."* —Edward B. Barbier, University of Wyoming

*"You should not separate biodiversity from climate change. They are fundamentally linked."* —Edward B. Barbier, University of Wyoming

*"If [environmental] services and markets are created without an understanding of business, they aren't going to work."* —Diane Osgood, BSR

### Overview

Osgood opened the session by asking Barbier to explain biodiversity and its connection to economics. Barbier described biodiversity, at its simplest, as the diversity of living things. There are three types of biodiversity:

1. Genetic: the variety of genes within one species
2. Species: the variety of species within one space
3. Ecosystems: the variety of ecosystems within an area

He went on to explain that biodiversity itself creates sustainable habitats and systems. For example, the diversity of species creates an interdependent food web through biological and abiotic (non-biological) relationships. Biodiversity also creates a sort of "ecosystems insurance," so that if one species dies off, another species that serves the same function will ensure the continuity of that system. However, if we start to stress ecosystems by eliminating biodiversity and its safety nets, the inherent interconnectedness of the system causes it to collapse at an exponential rate.

Barbier continued by discussing the services that biodiverse ecosystems offer both to humans and to companies. Some examples are fresh water, flood protection, storm protection, soil erosion protection, product harvesting, and waste recycling. But the quality of these services depends on how well these ecosystems function.



In the relationship between ecosystems services and economics, scarcity is a critical issue. As society develops and economies continue to grow, we put an increasing amount of stress on biodiversity and ecosystems. As a result, the services they provide lose quality and begin to disappear. And as these services become more scarce, their value increases. However, since all of this occurs outside of markets, it is difficult to monitor. Take the example of oil, which the market tracks: When oil is scarce, its price goes up. Barbier contrasted oil with an ecosystem service: “Can you track the price of flood control in the wetlands of Louisiana?” he asked. Creating environmental markets is one way to monitor, conserve, and, the hope is, improve the health of ecosystems.

Responding to Osgood’s question about whether the traditional idea of saving ecosystems through land conservation is outdated, Barbier said conservation can play a role. However, he added that we need to move beyond that idea. The next step is to educate the communities living in the areas about the ecosystems and provide them with incentives to maintain biodiversity. At the same time, we need to think about how to create environmental markets that value biodiversity, thus providing better quality ecosystems services—which ultimately benefits business.

Osgood closed the session by highlighting three key takeaways:

1. We need to take a systems approach instead of focusing only on individual parts, such as carbon offsets.
2. Finding a solution will require collaboration.
3. This emerging field will take time to develop, and business must be involved in the creation of the solutions in order to succeed.

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