

Ecological Restoration and Sustainable Development

During the past few decades, ecological restoration has planted a wide swath across the conservation landscape. It has become part of the lexicon of those interested in natural areas, wilderness and conservation parks, schoolyards, and other “green” areas throughout the world. Classes, and even programs, in ecological restoration are now available in high schools, community colleges, and universities. Ecological restoration has also made its way into the political life of nations, especially those “developed” countries with the disposable income to cleanup their environment.

Ecological restoration has, indeed, come a long way from its humble, but significant, beginnings in the 1930s here at the University of Wisconsin-Madison Arboretum. Those beginnings stressed the importance of recognizing and celebrating the restoration of what David Abram in *The Spell of the Sensuous* (1996) describes as the “more-than-human world.” The restoration of this “natural” world, and our relation to it, has been, and continues to be, the focus of our expanding ecological restoration efforts.

Today, with several decades of restoration experience behind us—but with a long way to go in terms of perfecting our craft—some people, including the leadership of the Society for Ecological Restoration International, are envisioning an expanded role for ecological restoration—one that would pair it with a more humanly oriented goal, that of sustainable development.

I do not pretend to know what sustainable development or sustainability is all about, except to say that it seems to serve as an emotional and intellectual antidote to a world that is seen as increasingly dominated by monolithic economic interests and ongoing political injustice. Sustainability, it seems, is a vision bordering on a belief system; a concept which holds that our increasingly global civilization has lost its way, that greed and profit-making have overturned earlier values of community and living within one’s means. References to self-sufficient farm communities or indigenous cultures are common among the adherents of sustainable development, as are visions of a “green” future, especially at a local or bioregional scale.

I trace the first discussion and practice of sustainability in the modern era to the advocates of the “back-to-land” movement of the 1930s, most notably Scott and Helen Nearing (*Living the Good Life: How to Live Sanely and Simply in a Troubled World*, 1954, Harborside, Maine: Social Science Institute). The work and writings of these people inspired various groups and individuals to look for sustainable ways to live in both the city and the countryside since the 1960s.

Important as those efforts may have been in raising the issue of sustainability at the personal and local level, it wasn’t until 1972, at the United Nations Stockholm Conference on the Human Environment, that a body of people from around the world agreed that a more sustainable direction was needed in order to protect the Earth’s resources. In 1987, The World Commission on Environment and Development in, *Our Common Future*, penned the now classic definition of sustainable development as “development which meets the needs of the present without compromising the ability of future generations to meet their own needs.”

In 1992, at the United Nations Conference on Environment and Development/Earth Summit in Rio de Janeiro, world leaders and representatives of various non-government organizations agreed to a Declaration on Environment and Development and identified social progress, economic growth, and environmental protection as the “three pillars of sustainable development.”

At the 2002 Earth Summit in Johannesburg, the attendees agreed to a Declaration of Sustainable Development, which states: “We recognize that poverty eradication, changing consumption and production patterns, and protecting and managing the natural resources for economic and social development are overarching objectives of, and essential requirements for, sustainable development.”

Perhaps not surprisingly, “sustainability” and “sustainable development” have become buzzwords within the community of international NGOs and elsewhere. Non-governmental organizations, such as IUCN (The World Conservation Union), IHDP (International Human Dimensions Programme on Global Environment Change), The Earth Charter Commission and Diversitas, each have funded programs dedicated to promoting sustainability.

Several basic tenets have become established from this ongoing, global dialogue. First, humans depend on the Earth’s resources (known in sustainability parlance as natural capital) to sustain themselves. Second, local involvement is necessary and must be open and participatory in the best democratic sense if developments are to be sustainable. Third, natural capital has intrinsic value that is often ignored or undervalued; accounting of such economic externalities is necessary. Fourth, humans will have to accept the fact that we live in a world of material and ecological limits, although we should make every attempt to use new technologies to help us increase longevity of the Earth’s natural capital.

So, where does ecological restoration fit into the framework of sustainable development? Quite simply, ecological restoration is a set of social skills and technological strategies that can be expected to restore depleted or damaged natural capital that has been deemed valuable to the economic and ecological well-being of a given human community. Such restorative activity, which will be done within the context of a democratic, participatory decisionmaking process, should increase the well-being of the community and raise the prospects of a better livelihood for present and future generations.

Several things come to mind as I ponder this marriage of sustainable economic development and ecological restoration and management. First, is not a new idea. If ecological restorationists want an example of a sustainable development approach that has worked for more than 50 years, they should look to the work of Herbert L. Stoddard, Sr. and Leon Neel in Georgia. Beginning in the 1941, Stoddard demonstrated that uneven-aged forest management combined with prescribed burning could produce long-term ecological benefits for longleaf pine ecosystems and sustainable incomes for the owners of those woodlands. Their work has been instrumental in defining a new culture of local land management in the longleaf pine-wiregrass ecosystems of the southeastern United States.

Unfortunately, the work of Stoddard and Neel is one of the few successful, long-term pairings of sustainable economics and ecology. One only has to review the environmental history of the early-to-mid 20th century to see that conservationists made economic arguments to support their ecologically oriented programs—often with unproductive or counterproductive results. This approach, in fact, provided Aldo Leopold with the antithesis to his Land Ethic. “When one of these non-economic categories is threatened, and if we happen to love it, we invent economic subterfuges to give it economic importance,” he wrote, explaining the psychology of the day. Leopold concludes his argument, “To sum up: a system of conservation based solely on economic interest is hopelessly lopsided. It tends to ignore, and thus eventually to eliminate, many elements in the land community that lack commercial value, but that are (as far as we know) essential to its healthy functioning. It assumes, falsely, I think, that the economic parts of the biotic clock can operate without the uneconomic parts. . . . An ethical obligation on the part of the private land owner is the only visible remedy for these situations.” (*A Sand County Almanac* 1966, p.247, 251).

Second, despite Leopold’s misgivings, most environmental economists and advocates of sustainable development believe that accurate accounting of natural capital is not only necessary, but doable. Environmental economists, in particular, have made strides in this area in terms of quantifying the worth of the Earth’s biota in terms of the services it provides (see Robert Costanza and others. 1997. The value of the world’s ecosystem services and natural capital. *Nature* (London) 387(6630):253-260), and in developing formulas for the “selling” of pollution rights, performance bonds, and wetland mitigation banking. While admirable and useful in making the point that “progress” has its unforeseen costs, the accounting of ecosystem services has a long way to go before it accounts for everything. Instead, such accounting will likely be

used to support and promote function-oriented types of ecological restoration projects at the expense of compositionally- and structurally-oriented projects. Moreover, as Karen Holl and Richard Howarth point out, as environmental accounting matures it will require a parallel maturation in terms of metrics for determining the success of a restoration at the community level and above (see *Paying for Restoration. Restoration Ecology* 8(3):260-267).

Third, restorationists will be drawn into the boundless issues surrounding sustainable development including the social aspects of empowerment and power, control and social justice, developed and underdeveloped economies, corporate and community interests. We will find ourselves asking: How do the economics of our work translate into real dollars and/or improved living conditions for the poor of this world? How can we make the leap from a sustainable economy to a sustainable way of living? How does one maintain a sustainable way of life in a consumption-oriented world? Ultimately, we will face the question: What does sustainability mean, and can we or should we judge what will be the best for future generations?

We will also be faced with the need to make agreements and compromises. Where will we bend? When will we stand our ground? How are we organized to work with people at all levels of life—internationally, nationally, locally, and personally? Are we prepared to deal with governments and the powers they wield? Do we have the social skills as well as the technical tools to get the job done?

If we accept the hand of sustainable development, we should be prepared, I believe, to test our vision of a different world order and our strength in making it a reality. Why? Because I also expect the status quo to challenge the influence of NGOs and the idea of sustainable development (see Wilfred Beckman. 2002. *A Poverty of Reason: Sustainable Development and Economic Growth*. Oakland, California: The Independent Institute). It’s nearly inevitable since the whole idea of sustainability runs counter to the existing consumption-based economic system of which most of us are a part. Moreover, as demonstrated by a recent conference, “Nongovernmental Organizations: The Growing Power of an Unelected Few,” sponsored by the conservative American Enterprise Institute, some national governments and global corporations see NGOs as self-selected groups who are attempting to set global policy and regulations.

Finally, exploring the wedding of ecological restoration and sustainable development will force us to recognize that there are many different ways of viewing the conservation landscape. We will have to come to terms with the fact that cultural, historical, economic, and geographic differences are going to translate into distinct land ethics as well as various localized definitions, models, and strategies for ecological restoration. We shouldn’t expect that the goals and objectives of a restoration project in China will be the same as they are in the United States. All restorationists, however, should develop restoration projects that have, as a minimum, a good blend of goals that will satisfy the needs of both human and the other-than-human beings. Anything less, while admirable and positive in terms of sustainable development, is not ecological restoration but rather economic rehabilitation.

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