

## **Human Ecology Perspectives on Sustainability**

### **Paul Faulstich**

If you take a map of the world and mark the regions that have the greatest biodiversity, then mark those places where Indigenous peoples are living with longstanding cultural traditions, you'll find a remarkable correlation. Biological diversity and cultural diversity are linked, and as one diminishes, so too does the other.

Awareness of the need to protect Earth's diminishing biological richness has focused greater attention on Indigenous peoples for a couple of reasons; their homelands are increasingly understood as places worthy of protected status, and their knowledge of these areas is unique and unparalleled.

Human ecology -- the study of human/nature interactions -- generates insight into the interface between peoples and the more-than-human world. As such, it is critically relevant to achieving global sustainability.

Tremendous environmental information is stored in the minds and cultures of local and Indigenous peoples. Human ecology, then, entails exploring systems of perception, cognition, belief, symbols, and uses of the natural environment. It illuminates human intercourse with the environment, thereby shedding light on knowledge systems as they relate to the natural world.

Studies in human ecology illustrate how many practices of land use and resource management are not only adapted to local ecosystems, but have shaped those ecosystems in ways that make them more diverse and stable. Examples of such mutualism are more likely to be found among peoples that have lived in particular places a long time than among recent arrivals.

In most Indigenous cosmologies, the human and the nonhuman are interdependent, and ecological limits and restraints are readily apparent and cannot be externalized. Romanticized notions of traditional ecological knowledge, however, will help neither the people themselves nor efforts toward sustainability, and a realistic assessment of environmental knowledge is essential for appropriate and effective conservation.

Widespread evidence shows that conservation projects are most successful when they incorporate cultural values and traditional institutions, and address locally identified goals. But local people are usually considered part of the problem, not part of the solution. This is because ecologists often regard human-modified landscapes as aberrations.

Fortunately, though, ecologists increasingly recognize contributions of traditional management practices, not only in the maintenance of ecosystems, but also in their restoration. Australian Aboriginal use of fire in maintaining viable populations of rufus hare-wallaby, for instance, is a well-

documented example of traditional resource management that has proved effective; the rufus hare-wallaby of central Australia became nearly extinct after cessation of traditional fire management techniques, but rebounded upon their revitalization.

Religious ideologies and ecological pedagogies translate into resource management practices, including such activities as performing ceremonies to ensure the well-being of the land, enacting restrictions to ease the strain of resource exploitation, and prescribing burns to "clean up the country."

Traditional ecological knowledge and resource management offer hope for collaborative problem solving. The challenge of community-based conservation, though, is formidable, not simply because of the scale of our global political arena, but also because of intense cultural change, and the nature of the Western environmental movement. By stepping into Indigenous territories, conservationists abandon their familiar world of wilderness advocacy and enter a realm regarded by some ecologists as too humanized to merit serious attention. And many local peoples have undergone extensive cultural dissolution through colonializing processes.

By deconstructing old ways of doing environmentalism while simultaneously reconstructing new ways, we can begin to build a new vision of sustainability for an interconnected world. Indigenous ecological

strategies should be regarded as key components in this reconstruction; they inform Western ecologists of effective sustainability strategies, and they represent a way of empowering Native peoples, whose knowledge and insights are key to informed land use and conservation.

Conservation biologists are increasingly appreciating Indigenous people's ecological knowledge and achievements, and are becoming more sensitive to human rights and sovereignty issues raised by conservation practices. This has led to an increased understanding of the value of learning from them and working in partnership with them.

One piece of the sustainability puzzle lies in the incorporation of traditional ecological knowledge. Some local practices of land use and resource management are not only adapted to local ecosystems, but have shaped those ecosystems in ways that have made them more diverse and stable. Then again, these land use practices have sometimes failed, which also yields important lessons.

Indigenous peoples' ecological knowledge, conservation and management practices, land use customs, and defense of their homelands have enabled many of them to maintain their territories with rich biodiversity. But let me be clear: In the call to recognize the value of Indigenous conservation, I am not suggesting that the steps made by Western conservationists be negated,

or that every local management practice be applied. However, the pattern is that where Indigenous peoples are living on their traditional lands, comparatively healthy ecosystems remain. The lesson here is obvious: Native peoples have performed remarkably better than industrial peoples in preserving the ecological integrity of their homelands, and in practicing sustainability.

In the 1970s, the ecologist Raymond Dasmann brought attention to the importance of Indigenous peoples for environmental conservation. He was in the vanguard of those calling for a rethinking of policies affecting Native peoples and the establishment of sustainability guidelines. Dasmann highlighted the distinction between 'ecosystem' –or Indigenous--and 'biosphere' –or industrial—peoples: ecosystem peoples depend on the resources supplied by local regions and know expeditiously if their exploitation patterns are damaging. Biosphere peoples, on the other hand, extract resources globally, and may not be aware of, or immediately affected by, the destruction of distant ecosystems that they might cause.

As I was leaving Kakadu National Park after a recent visit, I shook Mick Alderson's hand--he's Chair of the Kakadu Board of Management and is Cultural Advisor to Parks Australia--and asked him what advice he could give me to take back to the U.S. to share with Native American communities

interested in sustainability issues. He replied, "Well, first they gotta get more of their land back, don't they? Then they can begin to manage it properly." In his eyes, sustainability is not solely an environmental issue; it is an element of the wider concern of land rights, social justice, and cultural integrity.

Program developers and evaluators have conventionally viewed sustainability as divided into two independent, and even competing, factions; biological and social. But sustainability has always been, and will continue to be concerned with the management of cultural activities: As CRES people realize, what ecologists do is never independent of cultural, political, or economic interests.

The ultimate question for human ecology is whether it is possible to create socionatural systems that are truly sustaining; that is, that avoid the features of contemporary systems in which the human factor dominates to the detriment of the environment. This question cannot be answered with any degree of hope so long as the concepts of growth, technological neutrality, and unlimited gratification prevail. Social policies shaped by these concepts, offer little hope for sustained-resource programs. Any solution derived from the same paradigm as the problem seems only to heighten our ecological mess.

Nature is more complex than we ever can know, and it behoves us to seek the information and wisdom of *local* traditions that might enhance our understandings and practices of sustainability. An ecological metaphor for this brand of sustainability is the ecotone; the intersection between natural communities where diversity is enriched through the blending of the two. Here, natural elements coalesce and species intermingle in heightened richness.