

ENVIRONMENTAL DEGRADATION AND SUSTAINABLE HEALTH: A REVIEW OF THE CONTENDING ISSUES

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Summary

Much discussion on the environment has focused on issues such as global warming, biodiversity loss, and the global effects of environmental degradation. Relatively scant attention has been devoted to the consequences of environmental degradation on human health. This article reviews the evidence on the relationship between unsustainable use of the natural environment and deteriorating health profiles. It explores the interconnections between social values and resource use, and the implications of these interconnections for human health. It points out that materialism and the market-induced craving for wealth not only encourages the unsustainable use of the environment but may also lead to deterioration in human health. Using evidence from precolonial Africa, as well as the experiences of hunter-gatherer societies, the article highlights the salience of lifestyle choices (particularly nutrition, physical activity, and alcohol/tobacco intake) for health profiles. The case of the Pacific island of Nauru is used to illustrate how the transition to “technological living” and a materialist ethos can have grave implications for health and the environment.

1. Introduction

It is increasingly recognized that global environmental changes have grave implications for human health. Scientific research, for instance, has revealed that changes in stratospheric ozone concentration, world climate, biodiversity stocks, food-producing systems on land and sea, and freshwater supplies will have deleterious effects on health. There also is evidence that the accumulation of endocrine-disrupting organic chemicals may adversely affect reproductive health, as well as increase the risk of cancer. It has

also been shown that climatic fluctuations, such as the El Niño phenomena, are largely responsible for regional outbreaks of mosquito-borne and other infectious diseases.

Despite increasing evidence of the links between health and environment, discussion of health issues has tended to ignore ecological considerations. Indeed, the common practice has been for analysts to study human health and the spread of infectious diseases mainly in terms of the health characteristics of *individual* behaviors and lifestyles. This approach glosses over the complex interconnections between society, economic development, ecology, and health. A critical look at the structure of developing societies, particularly African societies, shows that the people in those societies interact with their environment in ways that often impinge on their living standards and health profiles. To understand these complex interactions and their evolution, a brief look at the historical antecedents of these societies is instructive.

2. The Interconnection between Community Values, Ecology, and Human Health

The interconnections between values, ecology, and health can be explored by examining the political economy of African societies. Precolonial African societies were characterized by “primitive communalism.” Under this socioeconomic arrangement, land and other community-owned resources were equitably distributed. The typical African community was egalitarian in that income disparity was the exception rather than the rule; there were donations of food and other items to those who experienced poor harvests or other calamities, and “labor reciprocity” was a common source of labor supply. This egalitarianism was fostered by the spiritual and moral values of these communities—values that eschewed materialism and individualism. The absence of a materialistic ethos meant that these communities adopted a lifestyle of modest consumption that was compatible with, and supportive of, their natural resource base. Though the material level of living of these societies was low by the standards of industrial societies, their egalitarian socioeconomic arrangements helped preserve their environment in the following ways:

- The absence of a materialistic ethos discouraged excessive consumption and thus reduced the pressure on land and other resources.
- Given the moderate consumption needs of the society, the level of output needed to satisfy those needs was compatible with local resource availability.
- The output levels required by the various African communities were so modest that many of them were able to use agricultural practices compatible with environmental preservation. One such system is *shifting cultivation* whereby land was left fallow for a number of years so that it could regain fertility.
- Because the available natural resources were adequate for their consumption needs, these communities did not resort to fertilizers and other chemicals to boost agricultural production. They even had enough land and forests, relative to their needs, to designate some land as spiritual and recreational.

There is circumstantial evidence that, in Africa, the adoption of a spiritual and moral ethos that preserved the region’s physical environment and biodiversity resulted in an epidemiological profile unique to that continent. For instance, the lack of stress arising from a modest level of production and consumption meant that hypertension, heart

failure, and diabetes were unknown in these societies. Because much of their food came directly from the natural environment (with no fertilizers, additives, and other chemicals), cardiovascular diseases, obesity, cancer, skin pigmentation, and other chemically induced diseases were rare. Although African societies lacked modern amenities such as electricity, pipe-borne water, refrigerators, television sets, and radios, they produced enough food for their people. Diets were typically more varied than those of people in the urban, industrialized countries of Europe and North America. Thus, malnutrition and poor diets were not widespread. Because they were well fed they also were able to develop immunity against many infectious diseases.

The example of traditional African cultures show that ethical and spiritual values play a significant role in preserving a society's environment, as well as improving the health profile of its inhabitants. Practices of traditional societies are in sharp contrast to the current focus of policy makers on expenditures on technological solutions such as drugs, hospitals, and increasingly expensive medical equipment as the primary way to improve the health of the populace. Lifestyle, diet, and social structure may be as important to human health as technology. An effective public health policy is one that takes cognizance of the complex relationship between values, ecology, and health. This complex relationship is further illustrated by the transition, by African societies, into an arguably perverse value-ecology-health trajectory in the colonial and postcolonial eras.

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Biographical Sketch

John M. Gowdy is professor of economics and director of the Ph.D. program in ecological economics at Rensselaer Polytechnic Institute in Troy, New York. He has been a Fulbright scholar in Vienna, Austria, and a visiting scholar at the Free University in Amsterdam, the University of Queensland, Australia, Tokushima University and Doshisha University, Japan, and the University of Zurich. He is the author of over 100 academic papers and eight books, including *Paradise for Sale: A Parable of Nature* (with Carl McDaniel; University of California Press, 2000), *Limited Wants, Unlimited Means: A Reader in Hunter-Gatherer Economics and the Environment* (Island Press, 1998), and *Economic Theory for Environmentalists* (with Sabine O'Hara; St. Lucie Press, 1995). His articles have appeared in the *Cambridge Journal of Economics*, *Ecological Economics*, *Environment and Planning A*, *Land Economics*, *The Journal of Regional Science*, *Structural Change and Economic Dynamics*, and *Review of Income and Wealth*.

Professor Gowdy's current research includes economic valuation of biodiversity and environmental theory and policy, economic anthropology, evolutionary models of economic change, and regional sustainable economic development using social accounting matrices. His current work in regional sustainable development is funded by the Hudson River Foundation, the National Science Foundation, and the Center for Economic Growth of the Rockefeller Institute. The Hudson River project is a pilot program constructing an integrated assessment model of the interactions between economic change, land-use change, and ecosystem integrity in a tributary of the Hudson River. Professor Gowdy is also involved in a sustainable development project in the rural village of Umuluwe in southeastern Nigeria where he is investigating the interrelated issues of climate change, globalization, and poverty.