SUSTAINABLE DEVELOPMENT— A FREE-MARKET PERSPECTIVE

Introduction

Political approaches that rely upon the coercive power of the state are the dominant means of advancing environmental values today. Indeed, environmental policy is political policy. Few discussions about environmental policy proceed without the underlying assumption that political institutions must be mobilized in this effort. There is another path, however, that of Free Market Environmentalism (FME). FME is premised not on political action, but on the voluntary actions of free individuals and the associations that they create. FME recognizes that the greatest hope for protecting environmental values lies in the empowerment of individuals to protect those environmental resources that they value (via a creative extension of property rights). This path has been relatively unexplored. It is complex; it is controversial; and obviously, in a short space I can only outline this alternative environmental policy approach. I only *hope* that I can persuade you that FME warrants further study as a way to complement, substitute, or perhaps even replace, the dominant political approach to environmental issues.

Chickens and Pigeons

When Europeans colonized this continent, there were billions of passenger pigeons in America. When these birds flew over Philadelphia, the skies would darken. While pigeons were ubiquitous, there were no chickens in North America. Today, the reverse is true. There are billions

of chickens, yet there are no passenger pigeons. What accounts for this massive shift in bird demographics?

Private stewardship arrangements may offer a superior way of addressing environmental concerns.

We understand why there are so many chickens: Chickens had owners who were interested in protecting them. Chickens were valued by their owners for meat and egg production, so their owners learned how to protect their investments. First they stood watch outside the henhouse door to guard against foxes and other predators; later they developed improved chicken-protection techniques. Chicken farmers have researched chickens to the point that we even know what kind of music chickens like. As amazing as it might sound, people have even developed contact lenses for chickens. People have spent so much time learning about chickens because ownership integrates the welfare of chickens with the welfare of people. As a result, chickens have done very well.

The passenger pigeon, however, was the "common heritage of all mankind." It had no protectors or nurturers. Nobody was empowered to protect it, either for profit (as with chickens), or for its own sake. The passenger pigeon is now extinct.

This story suggests that private stewardship arrangements may offer a superior way—at least in some cases—of addressing environmental concerns. And, if one does not like the chicken example, because they are used for food, consider other animals, from goldfish to butterflies to the scimitar-horned oryx, all of which have private protectors in this

Private institutions and private property effectively harness man's self-interest to advance the public interest.

country. Through the institution of private property, few private owners are able to protect many species merely because individuals place a value on those species' existence.[1] This fact suggests that linking human concerns about the environment via private ownership can be a very effective strategy for environmental conservation.

Framing the Question

Sustainable development is not an artifact of the physical world but of human arrangements. Environmental resources will be protected or endangered depending upon the type of institutional framework we create, or allow to evolve, to address these concerns. The institutions that encouraged the protection of chickens could have saved passenger pigeons. How environmental issues are framed has everything to do with how they are solved, and whether they are addressed at all. Private institutions and private property effectively harness man's self-interest to advance the public interest. Sustainable development requires that we explore the same options for dealing with environmental problems that we use for other important matters such as food and housing. There is no reason to believe that environmental matters must be handled in a substantively different manner than anything else.

Unfortunately, most people do not see it that way. For most people, the sustainable development problem is the "terrible toos" problem. Sustainability is threatened by *too* much unnecessary consumption, *too* rapid an introduction of untested technological innovations, *too* many

unwanted children, and existing wealth that is far *too* poorly distributed. The United Nations Earth Summit in June 1992, which I attended, adopted this dominant intellectual motif. If implemented, both economic and environmental values will be the worse for it.

Countering Malthus

"Carrying capacity" is exceeded, the argument goes, when the demand for resources exceeds the supply. When carrying capacities are exceeded, populations precipitously decline. From the Reverend Malthus to today, intellectuals have warned that human beings would exceed the carrying capacity of the planet. Hence, the call for "sustainable" development—a form of development that ensures that carrying capacity is never exceeded.

Recall the definition put forward by the World Commission on Environment and Development, chaired by Gro Harlem Brundtland: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."[2] In this sense, sustainability requires that, as resources are consumed, one of several things must occur: a) new resources must be discovered or developed; b) demand must be shifted to more plentiful resources; or c) the demand must be met in another manner. In sum, the Brundtland thesis is that as resources are used, they must be renewed or replaced.

Malthusians believe that this generalized replenishment cannot continue indefinitely. Reverend Robert Malthus asserted that "population, when unchecked, increases in a geometrical ratio. Subsistence

increases in only an arithmetical ratio." This, Malthus argued, would result in mass starvation.

In his later revisions to his work on population, Malthus began to suggest that such outcomes were not inevitable. And, in fact, increases in food production have generally outpaced increases in population. Historically, except in those regions where political turmoil reigns, per capita consumption of food has improved steadily for decades. Moreover, it is likely to improve equally dramatically in the future, as the shift of formerly communist nations toward market economies will further expand world food supplies.[3] After all, it will be very difficult to produce less in those regions than was produced under communist regimes.

A second era of concern occurred in the area of energy supplies, such as coal. Based on "scientific calculations," Lord Jevons worried that the world was running out of coal. Jevons would have been shocked to realize that although we have used far more coal than he dreamed possible, proven reserves have expanded even more rapidly. As a result, coal reserves are now measured in centuries, not years. Similar trends can be observed with other resources. World proven oil reserves have grown rapidly, reaching all-time highs, despite major increases in consumption. Whereas a decade ago politicians fretted about exhaustion of the world's oil resources, few give credence to such fears today.

For yet another example, consider the state of America's forests. A century ago, Gifford Pinchot warned that "The United States has already crossed the verge of a timber famine so severe that its blighting effects will be felt by every household in the land." At that time,

Americans were clearing almost 9,000 acres a day, a rate that continued for 50 years. America needed wood to build homes, fuel furnaces, and lay rail lines. Despite these trends, today there are more trees in America's forests than at any point in this century. This forest regrowth has been led not by the U.S. Forest Service—whose lands are chronically mismanaged—but rather by private landowners. Some, like the railroad companies, engaged in replanting solely to meet their own demands; others planted either for speculative purposes or for the simple reason that they could.[4] Gains in agricultural productivity have allowed the conversion of farm lands to forests. In fact, several eastern wilderness areas include lands once cleared for agricultural or other uses. The market system, founded on a system of transferable property rights, worked. The rebirth of America's forests is a testament to that fact. This system would also work in many other areas—if we let it!

Necessity Is the Mother of Invention

In the United States, about every 10 to 20 years, Malthusian fears sweep the nation. However, whenever the facts are examined, it becomes fairly clear that we are not going to run out of resources after all. Something is constantly going on to replenish resources and ensure sustainability. What's "going on" is that when available resources run low, prices increase and market incentives encourage people to produce more. If the material in question is truly limited, then there is an incentive to discover new approaches or sources. Hence, scientists and technologists discovered how to replace tons of copper wire with sand. Sand, in the form of silicon fiber optics, has vastly reduced the need for copper wire.

Sustainable development depends upon an institutional framework that relates demand and supply through the market.

The demand for more communication was the necessity that created this miraculous invention.

Sustainable development, however, is not a function of demand alone. Sustainable development depends upon an institutional framework that relates demand and supply through the market. In a free-market system based upon private property, entrepreneurs and innovators are encouraged to innovate to ensure that we have more tomorrow than we do today. But there is nothing cornucopian or "inevitable" about such improvements. Positive trends are assured only if we create the proper institutional framework. Still, the empirical evidence is clear: Resources integrated into a private property system do, in fact, achieve "sustainability."

Ensuring Sustainability: Private Protection of Commercial Resources

Can this observed sustainability be extended to the full range of environmental resources? Yes, although not without some difficulty. Ecological resources are already integrated into the marketplace through property rights in many areas. The task ahead is to extend these institutional arrangements to those environmental resources heretofore excluded from the private property rights system.

Consider the beaver in pre-colonial Canada.[5] Originally, there were many beavers and relatively few Native Americans. The result? Small demand, stable situation, and little danger of beaver extinction. Then

the French arrived and created a market for furs. Moreover, the French provided guns and traps, which made it easier to hunt beavers. As a result, the cost of acquiring beavers dropped precipitously and Indian settlers sought to take advantage of the situation. The beaver population was very quickly in danger of extinction.

Property rights have a tremendous potential of protecting ecological resources.

Native Americans in that region recognized what was happening. With increased demand pressures, the traditional common property approach was no longer working. In the past, beavers were hunted anywhere by anyone, but now they were disappearing. This is the proverbial "tragedy of the commons."

To respond to the beaver decline, the Native Americans in the region elected to divide the area such that each indigenous community had responsibility—essentially ownership—of the beavers in its area. Each group was given the ability to manage its beavers as it saw fit. Under that new allocation of property rights the beaver population quickly stabilized. Each community managed its local beaver population in a sustainable fashion.

This system prevailed until the English arrived approximately 100 years later. The English did not respect the Native Americans' property rights in beavers—or anything else. As a result, the private protection regime broke down and the beavers were quickly hunted to the verge of extinction. This story suggests that property rights have a tremendous potential of protecting ecological resources, but only if such private property rights are actually honored and defended by the political system.

Ensuring Sustainability: Private Protection of Non-Commercial Resources

The example of the beaver in colonial Canada is an economic one. The economic value of the beaver to the outside world and to the indigenous population led institutions to evolve that made sustainability achievable. Yet non-economic examples—examples where there was little commercial value—also exist. For instance, in the early part of the 20th century, the United States had a policy about hawks. The policy was very clear: Kill them! Hawks were predators; they preyed on chickens and other valued animals. The government paid bounties to kill chicken hawks. At the time, shooting birds was considered good practice for young men who might soon serve in the military.

Not everyone was pleased with this policy. One individual, Rosalie Edge, argued that hawks were worthy of protection. She valued hawks for their own sake and wanted to protect them. The Audubon Society, which already maintained a growing network of wildlife sanctuaries, declined to help her effort, arguing that protecting birds of plumage, game birds, and songbirds exhausted its resources. Given the political views of that era, a legislative solution was impossible. Most voters wanted to exterminate hawks, not save them. As a result, Edge sought to protect hawks privately.

Edge purchased a mountain ridge in Pennsylvania known as Hawk Mountain—called that because the ridge provides a useful updraft and had always attracted large numbers of hawks. The ridge was also a favorite spot for hawk hunting. Thousands of hawks were killed at this site until she bought the mountain ridge and posted the land against hunting. Gradually, she educated the public on the value of a species,

not initially popular. Hawk Mountain is now one of the leading raptor research centers in the world. Such a solution was possible only via the institution of private property rights.

Property rights are a means of empowering individuals to act as environmental stewards.

In a world where property rights can be privately acquired, people have the opportunity to create safe havens or refuges. Individuals who value ecological amenities can then play a critical role. A handful of people can make a difference. In politics, when the prevailing majority is not interested, the minority has few options. Property rights, then, are a means of empowering individuals to act as environmental stewards. They allow us to integrate environmental concerns into our general value system.

Private Property Encourages Cooperative Solutions

Environmental policies are generally discussed in the framework of market failures: Markets fail to account for environmental values. Pollution, for example, is considered an "externality" that the market fails to resolve. But there is something wrong with that argument about pollution. If it were true that pollution is a function of markets, then one would expect that the less market-oriented economies of the world would have cleaner ecologies. In fact, the reverse is true. Market economies not only produce more high-quality goods and services, they do so in a more efficient and environmentally sound manner.

Moreover, policy makers often talk about market failures. However, there is little discussion about the failures of government. The reality

is that political management has not done very well at protecting environmental resources. The creativity of a decentralized private approach is not readily achieved within a political bureaucracy. Moreover, political institutions do not foster accountability. The individuals who make resource-use decisions in a bureaucracy are rarely those who bear the costs or receive the benefits of such decisions.

Take the contentious issue of oil drilling in the Arctic National Wildlife Refuge (ANWR) and compare it to the reality of oil development in the Audubon Society's Paul J. Rainey wildlife sanctuary in Louisiana. Both of these areas are valued by environmentalists. Both also sit above oil deposits. In the case of ANWR, we have witnessed political gridlock. To put it very simply: The environmentalists want it preserved, and the oil companies want to drill. ANWR is a political football in the congressional debates over environmental and energy policy.

Rainey is different. This refuge is owned privately by the Audubon Society, rather than by the federal government. At this site, Audubon has the ability to exclude all visitors and activities that could damage the refuge or threaten the animals that live and breed there. Audubon could have prevented all oil development at Rainey. They chose not to do so. Preventing oil development would have required foregoing the economic benefits of that development—economic benefits that could fund other environmental efforts. As a private owner, Audubon had an incentive to reconcile the very same interests that are in conflict in the case of ANWR. Audubon developed an oil extraction plan that would allow drilling but also protect Rainey's ecological values. They did so by making accommodations: no drilling during the breeding season, a smaller oil platform, spill prevention and containment plans to prevent

contamination, and the like. Oil production has been occurring under these conditions at Rainey for over 20 years with little problem.

Politics too often encourages conflict and a zero-sum game.

Because of Audubon's private ownership, it was possible to integrate the human economic and ecological concerns. Private ownership encouraged people to work toward this type of win-win solution. Politics too often encourages conflict and a zero-sum game. Where politics has been dominant—as in the case of ANWR—conflict, not accommodation, has been the rule.

Private Property: An Alternative to Eco-Imperialism

Some of you may be familiar with the remarks of Mostafa Tolba, executive director of the U.N. Environment Program, who complained that "the rich are more interested in making the Third World into a natural history museum than they are in filling the bellies of its people."[6] Environmental paternalism is not likely to prevail in a world where people count, too.

The U.S. spotted owl situation has created great tension between economic and ecological interest groups. Cutting restrictions aimed at protecting the owl threaten the economic livelihood of whole regions. This tension is unnecessary, as an earlier example of a bird endangered by exactly the same situation, the wood duck, illustrates. Unlike most ducks, the wood duck nests in trees. The forest nesting habitat for these ducks was disappearing. There was no Endangered Species Act or political protection program; therefore, people concerned about the wood duck survival found a way of creating a new habitat for it—an artificial nesting box.

Many of us would rather live in colonial mansions, but if worse comes to worst, we can live in one-bedroom apartments. It turned out that the wood duck could modify its living habit as well and was quite able to live in the new artificial habitat. Wood ducks are now so plentiful that in recent years the Fish and Wildlife Service has recommended that hunters kill this duck first. It is important that in the zeal for environmental protection, environmentalists do not preclude alternative efforts. Unfortunately, current laws discourage such action by reducing the private value of lands in which endangered species are found.

Empowering Private Environmentalism

How do we get there from here? Initially, we should require government to take an Ecological Hippocratic Oath: First, do no harm. As many have pointed out, governments are doing vast ecological harm through their many programs, some based on fostering environmental protection. The United States is not a place where sugar should be grown, yet farm subsidies encourage this. No profit maximizing individual would harvest timber on the eastern slopes of the Rockies, yet such practices are fostered by the U.S. Forest Service.

Capitalists may cause ecological damage, but at least they try to make money doing it. The same cannot be said of many government programs. Too often the political process tries to create concentrated benefits through the imposition of generalized costs, such as environmental damage. This makes for disastrous public policy.

Outside the U.S., property rights approaches are even more important. In much of the world, property rights exist, but these rights are restricted to

a "use it or lose it" role. One can own the property, but only if used for a specified purpose. Thus, land in the Brazilian rainforest or grazing allotments on federal lands, must be developed or be lost. Such property rights are too limited. Without authority over how the property is to be used, the owner does not have sufficient incentive to act as a responsible steward. Environmentalists constantly fret over whether private property will be used in undesirable ways, but rarely consider whether policies discourage the use of property for conservation purposes. Without rethinking the role of private property, encouraging further private conservation activities will be very difficult.

Without authority over how the property is to be used, the owner does not have sufficient incentive to act as a responsible steward.

Global Issues

Rather than encourage property rights and free markets abroad, the conventional wisdom in environmental circles is to grant foreign aid to developing countries, while requiring environmental safeguards enforced via trade agreements. Such efforts are folly. Foreign aid too often is aid from governments, to governments, for governments. It rarely gets to the people who need it, and even more rarely fosters broad-based environmentally friendly economic development. I attended the Rio Earth Summit. A Brazilian friend was driving me around. As we were going through downtown Rio, he pointed to several large buildings and said, "We call that the Brazilian Triangle." "You mean the Bermuda Triangle?" I asked. "No, no," he responded, "the Brazilian Triangle. Those are all government investment agencies. Billions of dollars have

gone in and never been seen since." As environmental organizations such as Probe International in Canada have documented, foreign aid has largely created environmental destruction and expanding Swiss bank accounts, not sustainable economic development.

As for trade, let me focus on the Convention on International Trade in Endangered Species, known as CITES. As documented in a recent *New York Times Magazine* article, "Crying Wolf Over Elephants" by Raymond Bonner,[7] and the book from which it was adapted, *At the Hand of Man*, too many in the environmental movement have decided to sacrifice elephants in favor of effective fundraising.[8] By preventing international trade in ivory, we deprive Africans the use of an extremely valuable commodity. Yet, if development is to occur, resources must be utilized—even resources with such emotional appeal as African elephants. Eventually the CITES decision to ban international trade in elephant products will be reversed, but not before it adversely impacts thousands, if not millions, of Africans. Wealthy Americans may well believe that four-legged Africans are important, but they must never forget that two-legged Africans are, as well.

We also need to recognize and honor the diversity of values around the world. American environmental priorities are not shared by much of the world. Our obsession with cancer risks in the Third World could result in policies negatively impacting the rest of the world. In Brazil, concern over water pollution is not focused on parts per billion of theoretically carcinogenic chemicals, but rather on the very real risks of bacterial and other contaminants that kill people throughout the developing world. In these countries, few live long enough to fear cancer.

Conclusion

Sustainable development in an integrated world requires that we explore the full range of policy proposals. I have suggested that the U.S. political control strategy is failing and should not—indeed cannot—be extended to the developing world. In the United States, we spend hundreds of billions of dollars on environmental issues (over 2 percent of GNP according to 1990 EPA estimates).[9] We rely on an army of highly skilled technocrats, both within government and within the affected industries; we also depend on a civil service largely immune from bribery and corruption. The rest of the world does not have those billions of dollars, those unemployed technicians, and an unimpeachable civil service. If we are going to protect Spaceship Earth, we need to develop more robust institutional arrangements than politics provides.

If we are going to protect Spaceship Earth, we need to develop more robust institutional arrangements than politics provides.

Eco-privatization, the extension of private rights to the vast range of resources that have been left outside the marketplace, provides such a robust alternative. Trees cannot have standing in a court of law, but behind every tree—as well as behind every whale, aquifer, forest, and stream—can stand a private group or individual empowered to protect that resource. Such stewards, by protecting their resources, would protect the planet for the rest of us.

Consider the protection of biodiversity. Some argue that there are as many as 10 million to 100 million species of flora and fauna that

Environmental resources are too important to leave to politicians.

deserve protection. There are in the world today fewer than 200 governments, most of which are doing a dismal job of protecting their human populations. Do we really think a few hundred governments are going to protect 10 to 100 million anything? Yet, there are five and a half billion people on the face of the Earth. If people play a stewardship role, our odds of protecting the environment are vastly improved. Not all people will care about conservation, but certainly far more will than under the current political arrangement.

The challenge we face is how to integrate the human valuation of economic and ecological welfare. To date, political approaches have been relied upon almost exclusively to achieve this goal. As a result, environmental resources today depend on politicians for their protection. I believe this has been a mistake. Environmental resources are too important to leave to politicians. At the least, the private alternatives I have suggested warrant greater attention.

Originally published in Boston College Environmental Affairs Law Review, *in occasion of the 1993 National Conference on Sustainable Solutions—Population, Consumption, and Culture*.

NOTES

1 Ike C. Sugg, "Save an Endangered Species, Own One," *Wall Street Journal*, August 31, 1992. "Special Report: The Public Benefits of Private Conservation" in Fifteenth Annual report of the Council on Environmental Quality (1984), pp. 363-429.

2 World Commission on the Environment and Development of Our Common Future (1987), p. 43.

3 For a thorough discussion of agricultural and population trends, see Dennis Avery, *Global Food Progress* (Hudson Institute, 1991).

4 This discussion of forestry is based upon Jonathan H. Adler, "Poplar Front: The Rebirth of America's Forests," *Policy Review*, Hudson Institute, Spring 1992. Roger A. Sedjo, "Forest Resources: Resilient and Serviceable" in *America's Renewable Resources: Historical Trends and Current Challenges*, Kenneth D. Frederick and Roger A. Sedjo, eds. (Washington, DC: RFF Press, 1991).

5 This discussion is taken from Eleanor Lovelock Memoir No. 78, as cited in Harold Demsetz, "Toward a Theory of Property Rights," American Economic Review, Vol. 57, No. 2 (1967), pp. 347-359, https://econ.ucsb.edu/~tedb/Courses/Ec100C/Readings/Demsetz_Property_Rights.pdf.

6 Dr. Mostafa K. Tolba, "Counting the Cost," Statement to the Eighth Meeting of the Parites of CITES 1, March 1992, p. 10, https://cites.org/sites/default/files/eng/cop/08/E-Speeches.pdf.

7 Raymond Bonner, "Crying Wolf Over Elephants," *New York Times Magazine*, February 7, 1993.

8 Raymond Bonner, *At the Hand of Man: Peril and Hope for Africa's Wildlife* (New York: Knopf, 1993).

9 U.S. Environmental Protection Agency, Environmental Investments: The Cost of a Clean Environment, Paper Number EE-0294A, December 1, 1990, https://www.epa.gov/environmental-economics/environmental-investments-cost-clean-environment-summary-1990.