

# Building Natural Assets



New Strategies for Poverty Reduction  
and Environmental Protection

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*A publication of the Political Economy Research Institute's Natural Assets Project and the Center for Popular Economics*

## P R E F A C E

This report is an outcome of the Natural Assets Project, a collaborative initiative of the Political Economy Research Institute supported by the Ford Foundation. The report draws on papers prepared for the Conference on Natural Assets: Democratizing Environmental Ownership held in Santa Fe, New Mexico, in January 2000. We are grateful to the conference participants for insights, support, and inspiration. The focus of this report, like that of the conference, is on strategies for building natural assets in the United States. We hope that further research and discussion will explore the relevance of these concepts to environmental issues and institutional settings in other countries.

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# Introduction



Across the country and around the world, low-income communities are confronting challenges of economic development and environmental sustainability. In older urban areas, jobs and companies have departed, leaving abandoned sites and toxic wastes in their wake. In rural areas, decades of environmental abuse have depleted the natural resources that could generate new opportunities and livelihoods.

These challenges have sometimes sparked inspiring responses. In the Fruitvale District of Oakland, California, for example, the local Spanish-Speaking Unity Council argued that transit authority plans to build a multilevel parking structure on a parking lot next to a rail station would only further contribute to neighborhood blight and community separation. The Council led a community planning process which forced authorities instead to reclaim an arsenic-tainted “brownfield” for the parking garage and convert the original parking area and its environs into a shop-lined pedestrian walkway to the station, complete with space for a library, child-care center, and health clinic.

On the other side of the globe, in the village of Ralegan Siddhi in rural India, local residents have organized to restore and improve semi-arid lands by planting trees and building small-scale water conservation structures. Their aim is to ensure that every drop of rainwater that falls in the watershed either percolates into the soil or is stored in a surface reservoir. The villagers’ efforts are founded on the principle that water is a community resource, and that access to it should be distributed fairly. These ‘water harvesting’ techniques have made it possible for farmers to grow two or three crops each year, and incomes in the village have risen substantially as a result.

These examples reflect a convergence of three emerging trends. The first is a new focus on creating and sustaining assets—including access to land, water, air, forests, and other natural resources—as a way to combat poverty. In Fruitvale, for example, an eyesore slated for an even worse downhill slide was instead converted into an asset useful for community economic development.

The second trend is an upsurge in community organizing and participation in planning projects and the making of public policies. Foundations, government leaders, and community members are acknowledging that a key asset of a community is its “social capital”—the networks and ties that allow neighborhoods to come together to influence policy in ways that positively affect their interest.

The third trend is the growing recognition that improved environmental quality and economic growth can go together, especially for lower-income communities. In Ralegan Siddhi, for example, community-based soil and water conservation proved to be the key to economic development.

In this booklet, we outline this new “natural assets” approach to poverty reduction and environmental protection. We make four key points:

- Natural assets are not just pristine forests and untouched mountains. Urban land, open space, and clean air and water are also natural assets, particularly for people living in urban communities.
- Natural assets, along with other assets like financial wealth and community organization, can be part of a comprehensive strategy to reduce poverty and empower communities. Expanding natural assets in the hands of the poor will require investing in natural capital, redistributing rights of access to natural resources, ensuring that the poor obtain a fair share of the benefits generated by the natural assets they already own and manage, and democratizing rights to our common environmental resources.
- This focus on utilizing natural assets for poverty reduction is not a recipe for environmental damage: the ostensible trade-off between the environment and economic opportunity is not inevitable. People can degrade the natural environment, but they can also restore and enhance it.
- Blending the goals of environmental protection, social justice, and economic opportunity is not an easy task. Progress will require strong social movements, appropriate public policies, and supportive institutions.

# What are Natural Assets?



Natural assets include the land on which we live and grow our food and fiber; the water we drink and use to irrigate crops, generate electricity, and dispose of wastes; the air we breathe, into which we also emit wastes; the fish in the ocean and the trees in the forest; other animals and plants, both wild and domesticated; the atmosphere that envelops our planet; the ores, minerals, and fossil fuels beneath the earth's surface; and the solar energy that powers the biosphere. In short, natural assets are the wealth on which human well-being—and survival itself—ultimately depend.

Despite the focus on “nature,” natural assets are not confined to wilderness areas, but also exist in the daily environment of many urban dwellers. Open space, access to transportation and services, and the nexus of buildings and streets all help to determine the quality of life and the social fabric of the community. The natural assets of urban residents can be depleted by pollution, incinerators, hazardous facilities, and other “environmental disamenities.”

## INCOME AND ASSETS

How are such assets connected to the problem of poverty? As concern has grown about the increasingly unequal distribution of income in the U.S., many critics have placed the blame on markets. In this view, the strains introduced by globalization, privatization, and the rollback of social welfare programs have been major factors in the widening gap between have's and have-not's.

Other analysts have suggested that the problem is less rooted in the workings of the market—which is simply a mechanism for allocating resources and purchasing power—than it is in the distribution of wealth. Wealth, after all, is the base from which income is generated and distributed. If, for example, a community is rich in both machines and skilled labor—what economists call productive and human “assets” or “capital”—it will be able to enjoy more income than another community that is largely lacking in these resources. When wealth and productive assets are distributed unequally, so is income.

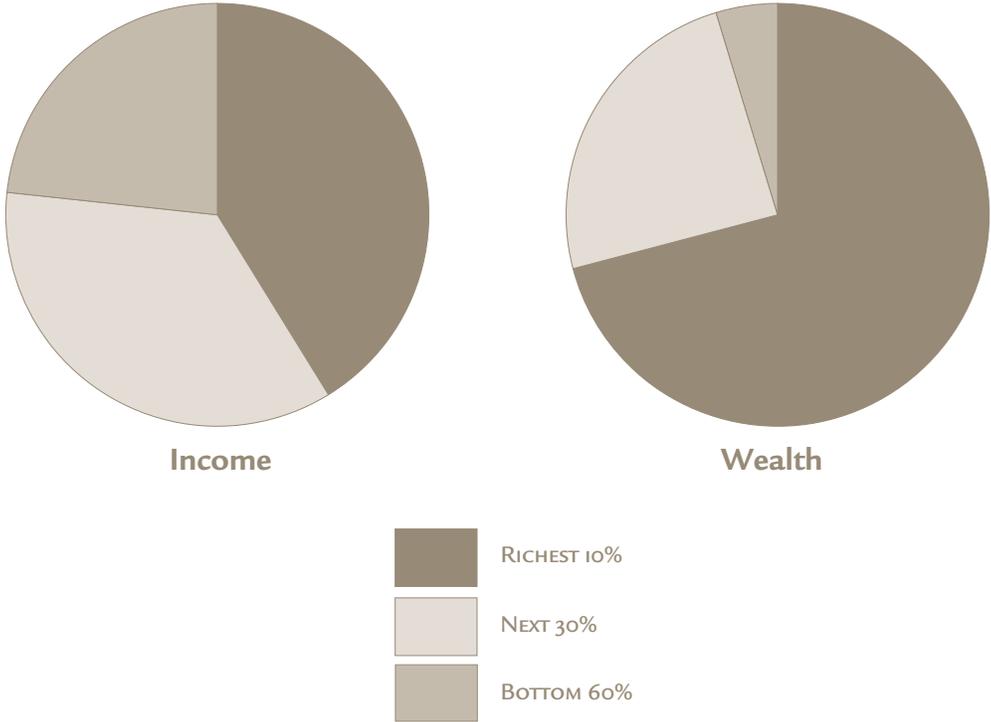
How the distribution of wealth is translated into the distribution of income depends on both

the market and government. For example, if the government sanctions racial discrimination, the same level of skills or “human capital” will yield less income for blacks than for whites. If the market is riddled with problems—such as firms that avoid paying their full costs of production by dumping contaminants into the air—then business owners increase their income, while the residents of nearby communities lose quality of life and bear unnecessary health costs.

Traditional strategies to improve the distribution of income have focused on the need to change government policies and market rules in order to raise the incomes of the poor in the short term. The asset-building approach focuses instead on improving the stock of wealth available to the poor, to achieve sustainable, long-term income gains. Natural assets, along with financial, human, social, and physical capital, can be an important part of this wealth.

Access to natural assets is typically just as unequal as access to other forms of wealth. A large share of land and other natural resources are owned by the wealthy. Low-income and predominantly minority communities not only possess fewer natural assets, but also are often dumping grounds for society’s wastes and environmental hazards. This maldistribution of natural resources and environmental health is no accident, but rather mirrors how wealth and power are distributed in society. For this reason, natural asset-building must be part of a broader democratic strategy for environmental sustainability, economic growth, and community empowerment.

DISTRIBUTION OF INCOME AND WEALTH IN THE UNITED STATES, 1997 - 98



*In 1997, the richest 10% of U.S. households received 41% of the national income, almost double the income received by the poorest 60% of households. The distribution of wealth was even more unequal: in 1998, the richest 10% of U.S. households owned nearly 71% of the national wealth, more than ten times the wealth owned by the poorest 60% of households. Source: Edward N. Wolff, "Recent Trends in Wealth Ownership, 1983-1998." Jerome Levy Economics Institute, Working Paper No. 300, April, 2000.*

## INVESTING IN NATURAL CAPITAL: THE ACEQUIA ECOSYSTEMS OF THE UPPER RIO GRANDE



When Spanish settlers arrived in the upper Rio Grande valley four centuries ago, in what is now southern Colorado and northern New Mexico, they found an arid land cut by the headwaters of the great river flowing from the Rocky Mountains. To make the land suitable for farming, the settlers built gravity-fed canals, called *acequias*, that branch from the river and carry water to irrigate the valley downstream. In this fashion, they patiently transformed these lands into fertile agro-ecosystems, supporting diverse crops—including beans, corn, alfalfa, and fruit trees—some varieties of which are unique to this microhabitat.

Today, the descendants of these Hispano farmers continue to maintain the irrigation channels. In so doing, they preserve important ecological balances, including the conservation of crop genetic diversity; the preservation of habitats and movement corridors for elk, deer, antelope and other wildlife; and the regulation of the quantity and quality of water flows. Far from being despoilers of nature, the farmers have invested their labor so as to increase the stock of natural capital in this bioregion. Sociologist Devon Peña describes humans as the “keystone species” in the *acequia* agro-ecosystem.

But the continued existence of this ecosystem today faces two serious threats. The first threat

comes from the poverty of the farmers, who live in a seven-county area that has been dubbed “the Appalachia of the West.” Unless a way is found to reward them for their role in sustaining natural capital, there is a danger that they or their children will abandon the land in search of prosperity elsewhere.

The second, more immediate, threat is posed by the clearcutting of forests on the high mountain slopes that form the headwaters of the Rio Grande watershed. Large tracts of these forest lands, once regarded as the common property of the *acequias* farmers, are now controlled by absentee landowners engaged in timber production and contemplating development for ski areas and second homes. By disrupting the “hydrological sponge effect” of the forest—its ability to absorb water during periods of heavy rainfall or snow melt, for gradual release to the river in dry spells—this deforestation in the headlands deprives the farmers of the water flows that underpin both the ecosystem and their livelihoods.

If the *acequias* farmers of the upper Rio Grande are to sustain the natural capital of the unique ecosystem created by their ancestors, they will need support in meeting both threats: economic rewards for the benefits they provide, and protection from environmental degradation upstream.

For more on the *acequia* irrigation system, see Devon Peña and María Mondragon-Valdéz, “The ‘Brown’ and the ‘Green’ Revisited: Chicanos and Environmental Politics in the Upper Rio Grande,” in Daniel Faber, ed., *The Struggle for Ecological Democracy*, New York: Guildford Press, 1998; and Devon Peña, “Rewarding Investment in Natural Capital: The *Acequia* Commonwealth of the Upper Rio Grande,” in James K. Boyce and Barry Shelley, eds., *Natural Assets: Democratizing Environmental Ownership*, New York: Russell Sage Foundation Press, 2001.

*In northern New Mexico and southern Colorado, gravity-fed acequia water channels built by Hispano farmers and maintained by their descendants support a unique agro-ecosystem.*

PHOTO CREDIT:

“Upper Rio Grande Hispano Farms: A Cultural and Environmental History of Land Ethics in Transition, 1598-1998,” a study of the Rio Grande Bioregions Project funded by the National Endowment for the Humanities.



## ASSETS GO TOGETHER TO GENERATE OPPORTUNITY

Assets, like many good things, often come together. Greater access to financial capital, for example, can enable cash-strapped farmers to invest in soil and water conservation. Similarly, access to financial capital in the form of student loans can help to pay for education, building “human capital.” Education, coupled with right-to-know laws that increase citizen access to environmental information, can improve people’s capacity to protect the environment. Education can also foster the building of “social capital,” informal networks and formal organizations that enable communities to work together for common goals.

For these reasons, greater access to natural assets is valuable not only in its own right, but also as a source of leverage to foster other forms of asset-building. The ownership of natural resources can serve as collateral to permit better access to the financial system. Staking claims to environmental “sinks”—the airsheds, water bodies, and lands into which wastes are discharged—can also yield important economic benefits, as when communities win access to public and private-sector resources for reclaiming and redeveloping abandoned brownfields.

Community empowerment can be a key element in the strategy to improve environmental conditions, because a mobilized and organized community is less vulnerable to the siting of environmental hazards and other abuses by outside interests (see sidebar on page 8). The right to a safe environment is increasingly recognized as a universal concern, and struggles to defend this right have the potential to unite diverse groups. Indeed, the environment offers fertile ground for forging connections that cross differences of race, ethnicity, class, and neighborhood. At the same time, struggles for environmental justice can help to build community organization, providing a launching pad for efforts to tackle the broader issues of unequal access to economic opportunity and public decision-making.

## NATURAL CAPITAL, SOCIAL CAPITAL, AND ENVIRONMENTAL JUSTICE



The environmental justice movement has long argued that the disproportionate siting of hazards in communities of color reflects not only racism, but also a cold-hearted calculus of the unlikelihood of effective resistance by neighborhood residents. The potential strength of resistance a community can offer may be measured by the level of assets, or capital, that it can deploy in its defense: areas with less economic or political power are more vulnerable. Activists have sought to counter this vulnerability by organizing the community, thereby building social capital.

The importance of such social capital is illustrated in a recent study of toxic storage and disposal facilities in metropolitan Los Angeles, California. Researchers Manuel Pastor, Jim Sadd, and John Hipp sought to determine whether such facilities had been placed in minority neighborhoods, or, as some have argued, minorities had moved to those neighborhoods after the siting of the facilities, perhaps after a fall in home values enticed newcomers to accept a tradeoff between risk and housing.

The researchers found virtually no evidence for the “field of bad dreams” notion: build a toxic facility and minorities will come. Instead, the evidence suggested that minority neighborhoods had indeed been targeted in the siting process. As the researchers probed further, they discovered that the communities that proved to be most vulnerable were those evenly split between African-Americans and Latinos and those undergoing rapid demographic change. Their explanation: such areas are especially weak in social capital, because it is more difficult to bring residents together around shared institutions, such as a church or cultural identity.

But if these communities are favored dumping grounds, then they also ought to be the target of special organizing that takes into account the changing social fabric. In keeping with this view, environmental justice groups have long stressed the importance of multi-racial dialogues and coalitions. Building these bridges can be indispensable in building both social capital and natural assets.

See Manuel Pastor, Jim Sadd, and John Hipp, “Which Came First? Toxic Facilities, Minority Move-in, and Environmental Justice.” *Journal of Urban Affairs*, 23: 1-21, 2001.

# Can Building Natural Assets Reduce Poverty?



There are times when we face tradeoffs between the environment and the economy. Humans necessarily consume resources, and environmental constraints can pose limits to economic expansion. Some people may worry that a strategy that relies on natural assets to raise the incomes of the poor will lead inevitably to the sacrifice of wetlands, forests, or other open spaces to the construction of new housing or factories.

Indeed, many observers have viewed the interests of the poor as being diametrically opposed to those of the environment. Pressed by economic needs, the poor are said to regard environmental protection as a luxury: the need to ensure that one's family survives today overwhelms any thought about the well-being of future generations. By the same token, when environmentalists restrict development, they are accused of stopping the economic party just as new guests are arriving.

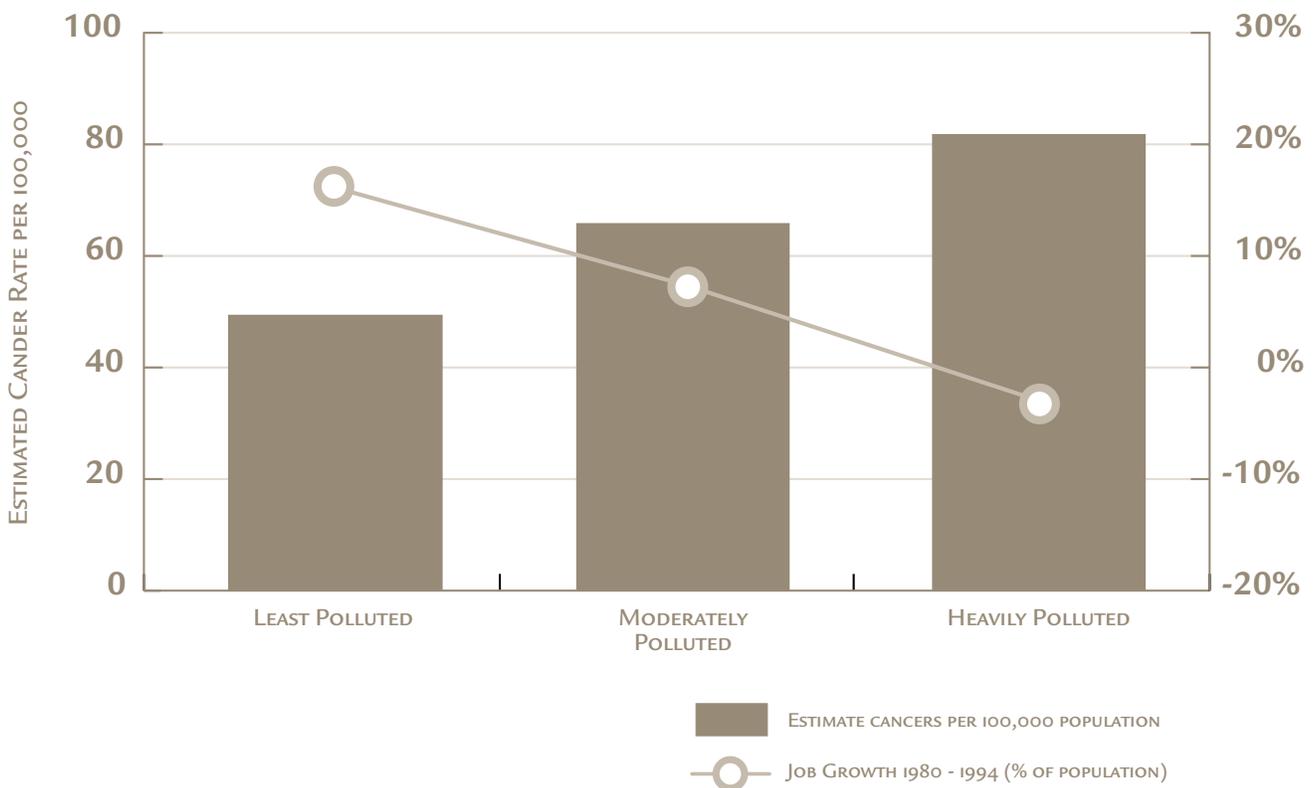
But this traditional dilemma—shall we protect the environment or generate economic opportunity?—is very often misplaced. After all, most environmental damage is done not at the instigation of poor citizens, but rather at the behest of wealthy corporations and individuals who live far from the resulting pollution and resource depletion.

Moreover, the evidence in favor of the supposed jobs-environment tradeoff is now under challenge. Research by Paul Templet at Louisiana State University's Environmental Studies Institute, for example, has found that states that offer the largest subsidies to polluters—despoiling the environment in the name of economic growth—actually end up with lower levels of income, higher levels of poverty, and greater fiscal strain.

The same pattern has been found at a more local level. Manuel Pastor looked at the evidence for Los Angeles County, California, one of the most polluted areas in the U.S. He calculated the cancer risk from airborne pollution faced by area residents, and divided the county into thirds based on the extent of pollution. He found that those areas with the highest levels of air pollution, and consequently the greatest health risks for their residents, were disproportionately populated by people of color. Yet the heightened risk from exposure to pollution did not appear to pay off economically: the most polluted areas experienced the lowest levels of job growth.

Reducing poverty can help, rather than hurt, the environment. Lifting people from desperate economic circumstances can free them to take a long-term view of natural resource management. More importantly, as low-income communities gain economic and political leverage, they are better able to protect their environment against the depredations of others. Empowered communities that refuse to accept disproportionate pollution cut off the option of “dumping in someone else’s backyard,” helping to push the larger society to adopt more effective methods of emissions reduction and pollution control.

### DOES POLLUTION BRING JOBS OR CANCER? EVIDENCE FROM LOS ANGELES COUNTY



*In the most polluted areas of California’s Los Angeles County, the lifetime cancer risk from hazardous air pollutants was substantially higher than in the least polluted areas. But communities that bore the heaviest pollution burdens and cancer risks were not rewarded with stronger job growth. On the contrary, employment in these areas declined by 4% from 1980 to 1994, whereas it rose by 16% in the least polluted areas.*

*Source: Rachel Morello-Frosch, Manuel Pastor, and Jim Sadd, “Environmental Justice and Southern California’s ‘Riskscape’: The Distribution of Air Toxics Exposures and Health Risks Among Diverse Communities,” *Urban Affairs Review*, 2001; job growth data from the Southern California Association of Governments.*

## IS INEQUALITY BAD FOR THE ENVIRONMENT?



Traditional economic analyses have tended to regard distribution as an issue of fairness to be considered quite apart from either economic efficiency or environmental protection, yet new research presents intriguing evidence of a link between inequality and environmental degradation.

An international study compared differences in concentrations of air pollutants, water pollution, and access to clean water and sanitation facilities among both high-income and low-income countries. The study found that countries with more equal income distribution, greater political rights and civil liberties, and higher levels of literacy tended to have better environmental quality, whereas countries with less equal income distribution, fewer political rights and civil liberties, and lower levels of literacy tended to have worse environmental quality. The explanation: the effectiveness of citizen demands about the environment is likely to depend on the extent of political equality, and where inequalities are great,

the polluters will be less compelled to respond to the concerns of the citizenry.<sup>1</sup>

A study of the 50 U.S. states yields a similar finding. Variations in power distribution within states were measured by voter participation, tax fairness, Medicaid access, and educational attainment. The study showed that states ranking lower in these respects, reflecting a more unequal distribution of power, had weaker environmental policies, more environmental stress, and higher rates of infant mortality and premature deaths.<sup>2</sup>

Finally, a study of California suggests that counties that are highly segregated along income, class, and racial lines have higher levels of hazardous air pollutants and the attendant health risks. Apparently, when hazardous materials can be readily dumped in someone else's backyard thanks to political and economic disparities, more dumping will occur.<sup>3</sup>

The lesson of these studies is that inequality is bad for the environment and for public health.

<sup>1</sup> Mariano Torras and James K. Boyce, "Income, inequality, and pollution: A reassessment of the environmental Kuznets curve." *Ecological Economics* 25 :147-160, 1998.

<sup>2</sup> James K. Boyce, Andrew R. Klemer, Paul H. Templet, and Cleve E. Willis, "Power distribution, the environment, and public health: A state-level analysis." *Ecological Economics* 29: 127-140, 1999.

<sup>3</sup> Rachel Morello-Frosch, "Environmental Justice and California's 'Riskscape.' The Distribution of Air Toxics and Associated Cancer and Non-Cancer Risks Among Diverse Communities." Dissertation. Environmental Health Sciences, University of California, Berkeley, 1997.

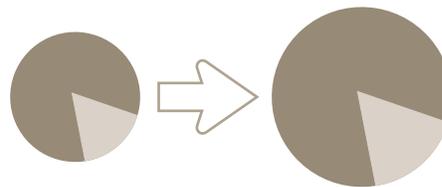
# Making a Difference: Four Routes to Natural Asset Building



If the focus of poverty reduction shifts to asset-building, this raises the question: what are the best routes to expand and enhance the assets held by the poor? In the case of natural assets, there are four main routes:

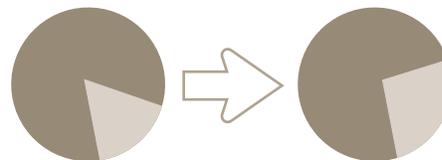
- **Investing in Natural Capital:** The investment route adds to existing stocks of natural capital. If this investment is targeted especially to lower-income individuals, as in the case of Head Start investments in the education of poorer children, such investment can increase not only the size of the asset pie, but also the share of the poor.

*Investment expands the natural asset pie, creating a bigger slice for the poor.*



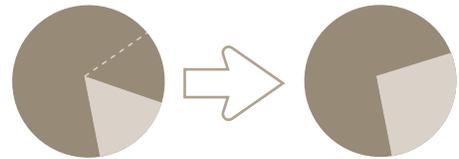
- **Democratizing Access:** Even where the total stock of natural assets remains fixed—as in the case of land, for example—democratizing rights of access can expand the poor’s share of these resources. Democratizing access requires the redistribution of assets from the wealthy to the poor.

*Democratizing access redistributes the pie so that the poor have a larger share.*



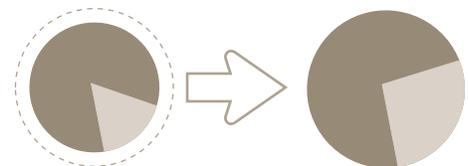
- **Rewarding Benefits to the Community:** In some cases the natural assets owned by the poor generate important benefits for others. For example, small forestland owners can provide ecological services via watershed management, biodiversity conservation, and carbon sequestration. Making sure that the poor are paid for the benefits their resource management provides to others would strengthen both their livelihoods and their incentives to continue providing these services.

*Rewarding the poor for managing their natural assets so as to benefit others increases their incomes and provides an incentive to continue to provide these benefits.*

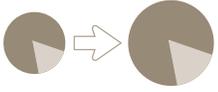


- **Sharing the Commons:** The air and water that provide environmental “sinks” for the disposal of wastes are “open-access” resources. In theory, these natural resources are available to everyone, but in practice the benefits of using these sinks flow mainly to those with the power to appropriate them. Struggles to establish a more equitable distribution of rights to these resources, including community struggles for environmental justice, can improve well-being and income.

*Sharing the commons means securing the rights of the poor to “open-access” resources like clean air and water.*



We discuss these routes to natural asset building in more detail in the following pages, and provide some examples to illustrate their potential.



Like other types of capital, the stock of natural capital can be increased or diminished by human activity. From the domestication of plants and animals some 10,000 years ago and the subsequent evolution of the thousands of varieties of rice, maize, wheat and other crops that underpin world food security, to the protection and restoration of vulnerable lands and ecosystems today, we have added to the wealth of natural capital on which our livelihoods ultimately depend. At the same time, examples of environmentally degrading human activities are all too familiar, from the contamination of air, land, and water to losses of soil, wildlife habitats, and species. The extent to which we invest in natural capital determines whether we appreciate or depreciate our stock of natural assets.

Many of the poor—particularly in rural areas—suffer from what Anil Agarwal and Sunita Narain of India’s Centre for Science and the Environment term *ecological poverty*: their livelihoods are constrained by the impoverishment of the natural resources on which they depend. Progressive investment—investment that maintains and increases the existing asset base of the poor—can help to reduce poverty and to protect the environment.

Strategies to invest in the natural assets of the poor can take two forms. First, *public and philanthropic resources* can be mobilized for this purpose. For example, the U.S. Soil Conservation Service and the U.S. Forest Service provide public funds to farmers and forestland owners to augment the value of their natural assets. The amount of public funds available for such purposes is, of course, limited. In principle, government cost-sharing programs and other investment supports are available to large and small landowners alike. But in practice, poor and minority landowners have often been left out. In 1997, black farmers won a settlement in a class-action lawsuit they brought against the U.S. Department of Agriculture charging racial bias in its loan programs. A progressive investment strategy would reverse such biases, preferentially allocating public resources for private land and water conservation to the poor who most need this support by virtue of their more limited access to private financial markets.

The second strategy is to facilitate *investment by the poor themselves*. For example, in urban areas across the country, the poor are investing the one asset they do own, their labor, in community gardens aimed at growing food for their own consumption and for sale in local markets. Non-profit and public-sector agencies can facilitate this investment by helping communities gain access to land, notably to the vacant properties in their midst.



## DEMOCRATIZING ACCESS TO NATURAL RESOURCES

Democratizing access to natural assets is typically more controversial than investment, since a bigger slice of the pie for the poor means a smaller slice for others. As Melvin Oliver and Thomas Shapiro remark in their book, *Black Wealth/White Wealth*, such policies challenge traditional property rights and are “the most difficult ones on which to gain consensus, but the most important in creating a more just society.”

Of course, history is replete with changes in the allocation and definition of property rights: in the U.S., the expropriation of Native American lands and the abolition of slave “property” are two of the most striking examples. Redistributing natural assets for equitable gain also has a long history. For example, land reform—the transfer of rights from large landowners to tenant farmers and landless laborers—was a key element in post-war development strategies in Japan, China, Taiwan, and Korea, and helped to contribute to economic growth and equity.

Where property rights are clearly defined by law, and widely accepted as legitimate, there is little scope for redistribution unless it is accompanied by compensation to the previous owners.



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*Members of San Francisco’s Garden Project cultivate a half-acre market garden built on a former brownfield.*

But where property rights are uncertain or contested—as, for example, when contaminated lands or so-called brownfields lead to a tangle of claims and liabilities—there is more scope for reconfiguring property rights so as to democratize access to land and other natural assets. In inner-city Boston, Massachusetts, for example, the Dudley Street Neighborhood Initiative, a community organization in one of the city’s poorest and most contaminated neighborhoods, succeeded in obtaining control over vacant lots by using the power of eminent domain, and developed these sites to provide affordable housing, public parks, and land for community gardens (see sidebar, this page).

## “TAKE A STAND, OWN THE LAND”: BOSTON’S DUDLEY STREET NEIGHBORHOOD INITIATIVE



The Dudley Street neighborhood in the Roxbury section of Boston, Massachusetts, is one of the poorest communities in the city. The average annual income in the neighborhood is \$7600 per person, less than half the city-wide average. Its population is a multiracial and multiethnic mix of African-Americans, Cape Verdeans, Latinos, and non-Hispanic whites. In the early 1980s, the neighborhood was dotted with vacant lots and abandoned properties, the legacy of years of ‘white flight,’ redlining, disinvestment, and arson. Many of these sites were used for the illegal or quasi-legal dumping of trash, construction debris, and chemical wastes, leading to health hazards and noxious smells.



In 1985, residents formed the Dudley Street Neighborhood Initiative (DSNI) in an effort to organize for community-based development. The DSNI’s first campaign targeted dumping by private contractors and public-sector agencies. Mobilized under the banner “Don’t Dump on Us!,” the community succeeded not only in blocking further dumping, but in com-

bining the voluntary labor of residents with assistance from municipal authorities to clean up the worst sites.



This campaign stemmed some of the negative environmental and social spillovers from these sites, but to turn them into positive assets for the community required something more. Some of the vacant lands had passed into the hands of the city after their owners defaulted on back taxes. Others remained in the hands of private firms and individuals, mostly absentee owners, many of whom were holding the land as a speculative investment, gambling that the neighborhood’s proximity to downtown Boston would eventually make it a candidate for gentrification. Unless the community could obtain rights to these properties, there was little prospect of turning them into productive assets.

In 1987, the DSNI initiated a community planning process that created a master plan for revitalization of the neighborhood with the development of housing, retail shops, and public

spaces. To make this vision become a reality, the DSNI launched a new campaign under the banner, “Take a Stand, Own the Land.” The organization’s patient lobbying and public pressure bore fruit when city officials not only agreed to hand over some publicly owned properties, but also granted the DSNI the power of eminent domain over abandoned private properties, making it the first community-based organization in the country to win the power to compel owners of such properties to sell the land at a “fair” price. “What we’re doing here today,” Boston Mayor Raymond Flynn declared before a cheering crowd at an October 1988 rally, “is sending a very, very clear and powerful message all across the country, and that is that city government ought to be the



best friend of neighborhoods.”

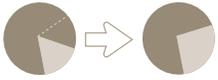
In the ensuing years, the DSNI has organized the clean-up of numerous sites and their redevelopment for housing, playgrounds, parks, and community gardens where residents grow corn, vegetables and fruit for their own families and for sale at the local farmers’ market. In what environmental scholar William Shutkin terms “a modern twist on Jefferson’s dream,” community mobilization and urban land redistribution in the Dudley Street neighborhood have demonstrated that fighting poverty and restoring the environment can go hand in hand.

*At a rally in October 1988, residents of Boston’s Dudley Street neighborhood demanded that city officials grant them the power of eminent domain to reclaim vacant lots for community development. Announcing his support for this effort, Boston Mayor Raymond Flynn declared, “What we’re doing here today is sending a very, very clear and powerful message all across the country.”*



*“The earth is given as a common stock for man to labour and live on...[I]t is not too soon to provide by every possible means that as few as possible shall be without a little portion of land.”*

—THOMAS JEFFERSON, LETTER TO JAMES MADISON, 1785.



## REWARDING BENEFITS TO THE COMMUNITY

In some cases, the benefits generated by natural assets flow mainly to people other than the asset owners. For example, the crop genetic diversity that is sustained by small farmers around the world serves as the ultimate foundation for the food security of present and future generations of humankind, for it provides the genetic building blocks for breeding new varieties that can withstand climate change and new insect pests and plant diseases. Yet the people who furnish this vital ecological service typically receive no compensation. Steps to reward farmers who sustain crop genetic diversity, to pay them for managing their natural assets that benefit all of us—rather than expecting them to continue providing what is in effect an unpaid subsidy to the global public—would help both to reduce poverty and to safeguard valuable biological resources. Farmers and forest landowners in watersheds that serve metropolitan areas likewise provide an ecological service, by regulating the quantity and quality of water that flows from their land. In effect, they can engage in two sorts of production at the same time: raising crops, livestock, and timber and providing stable flows of clean water. The problem is that they are paid for the first, but not for the second, with predictable effects on their land-use priorities. Many landowners produce contaminated or unstable water supplies as a byproduct of agricultural or forestry activities. Measures to reward the provision of a clean and stable water supply would increase both their incomes and their incentive to manage water in the public interest.

Increasing public awareness of the importance of such ecosystem services is now sparking innovative efforts to ensure their continued provision. *Conservation easements*, in which landowners sell development rights to non-profit organizations or public-sector agencies, or relinquish these rights in exchange for lower property taxes, are widely used to protect farmlands and forestlands from development. The city of New York has a \$250 million program to buy conservation easements and lands in the watersheds of municipal reservoirs, reckoning that this is cheaper than building more expensive water treatment facilities. “Green marketing” for organic foods, shade-grown coffee, and sustainably harvested timber responds to consumer demand for production processes that protect the environment.

Such policies have focused on the goal of environmental protection, but they could also embrace the goal of combating poverty. For example, limited funds for the purchase of conservation easements could be targeted preferentially to cash-poor landowners. Similarly, the certification of products could be based on social as well as environmental criteria, as pioneering efforts have already demonstrated (see sidebar, page 19).

## THE FOREST STEWARDSHIP COUNCIL: CERTIFYING RESPONSIBLE FOREST MANAGEMENT



When buying products from lumber and coffee to sweatshirts and soccer balls, many consumers would like to know that the goods they are buying were produced in a responsible manner. They would prefer to buy lumber that has not been harvested by denuding hillsides or destroying rainforests. They would prefer to buy coffee and other crops that have not been grown by poisoning the land with indiscriminate pesticide use. They would prefer to buy apparel and sporting goods that have not been produced by child laborers, prisoners, or other workers deprived of basic rights. In many cases, they would be willing to pay a little more if they could have these assurances.

The stumbling block in harnessing this demand for more responsible environmental and social practices is the anonymous character of the market: it is hard to know how the commodities we buy were produced. That's where the new certification move-

ment comes into the picture. Around the world a variety of organizations are emerging to monitor production practices and to certify those products that meet well-defined standards for responsible management. The certified products often reap a price premium in the market.

The Forest Stewardship Council (FSC), based in Oaxaca, Mexico, is a good example. The FSC was founded in 1993 with the aim of certifying wood products derived from forests managed

according to principles that include both environmental protection and respect for the rights and well-being of local communities, indigenous people, and forest workers. The market for certified wood products has grown rapidly. By the year 2000, about 45 million acres of forestlands, including 6 million acres in the United States, were being managed under FSC criteria.

A major breakthrough for the FSC came in

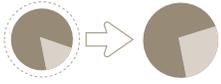
August 1999, when Home Depot, the Atlanta-based chain of do-it-yourself stores, pledged to give preference to FSC-certified wood and to phase out sales of wood from endangered forests. Home Depot's decision came after a spirited campaign by environmental activists, that included the installation of the 'Home Depot' logo, made from two tons of recycled fabric, on a clear-cut hillside in the ancient coastal rainforest of British Columbia, Canada.

If done right, timber harvesting can be compatible

with environmental protection, watershed regulation, and biodiversity conservation. But when wood and pulp production are the only activities rewarded by the market, the quest for maximum profits can lead landowners to adopt harvesting techniques that undermine these environmental services. Certification helps to redress this imbalance, providing an incentive for environmentally responsible management.



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## SHARING THE COMMONS

Some important natural resources are nobody's property. No one owns the air or the oceans, for example, yet both serve as vital environmental sinks for the disposal of wastes. As a result, both are vulnerable to the so-called "tragedy of the commons": everyone is free to pollute and no one is clearly responsible for restoring and rejuvenating the air and water.

The tragedy has another, often overlooked dimension. While resources with such broad "open access" are theoretically available to all, in practice open access is often quite unequal. In open-access fisheries, for example, the edge goes to fishing fleets that can use the most efficient, or ruthless, technologies to haul in fish. And while everyone may have the same right to pollute the airshed or watershed, everyone does not have the same power to do so: a poor family living near a chemical factory may have the same right to pollute the air as the factory owners, but the consequences are hardly the same.

Poorly defined open access leads to not one tragedy but two: the abuse of natural resources and their appropriation by the powerful at the expense of those with less power. Community-based struggles against toxic pollution of air and water often attempt to address both tragedies of open access, seeking to reduce pollution and to ensure that certain communities are not the target of environmentally degrading practices because of race or income.

The right to live in a clean and healthy environment is affirmed in constitutions across the globe (see sidebar on page 22). In legal theory, these constitutional provisions have already established a radically egalitarian distribution of rights to clean air and water. The challenge is to translate these words into actual practice.

Insofar as communities are able to secure these rights, they strengthen their bargaining positions with would-be polluters. The benefits from such community-based natural asset building can include better health, improved environmental quality, and higher property values. In addition, communities may be able to obtain income in compensation for any pollution they are willing to accept within the bounds set by environmental regulations. Such compensation—an application of the 'polluter pays principle'—need not imply that regulatory agencies should adopt more relaxed pollution standards; rather, it is based on the premise that as owners of their environment, communities have a right to compensation for pollution even within legal limits.

# THE SKY TRUST



Emissions from the burning of fossil fuels are the main cause of the rapid increase in atmospheric carbon dioxide, the most important culprit in the ‘greenhouse effect,’ that most climatologists agree is leading to global warming. Meeting in Kyoto, Japan, in 1997, governments from around the world negotiated an international accord to reduce their carbon emissions. The Kyoto target for the United States, similar to those for most other industrialized countries, is to cut its carbon emissions by the year 2012 to 93% of the 1990 baseline level. So far Congress has refused to ratify the accord, holding out for binding limits on carbon emissions by developing countries. Nevertheless, it is likely that sometime in the next few years the U.S. and other countries will take concerted steps to curb carbon emissions.

If and when this comes to pass, one likely mechanism to bring about emission reductions will be increases in the price of fossil fuels, to induce cutbacks in their use. In effect, prices will be raised to include the cost of skyborne carbon storage, something previously treated as an open-access resource.

Who will receive the money from these higher prices on fossil fuels? One possibility is simply to let the oil, gas, and coal companies reap windfall profits. Another possibility is to raise the price via energy taxes, handing the proceeds to the government, which could then cut some other taxes or increase public spending. The Washington, D.C.-based Corporation for Enterprise Development has proposed a third alternative, the creation of a “sky trust.” Under this plan, revenues from fees on carbon emissions would be deposited into a trust fund, established by an act of Congress but managed independently, with the proceeds distributed equally every

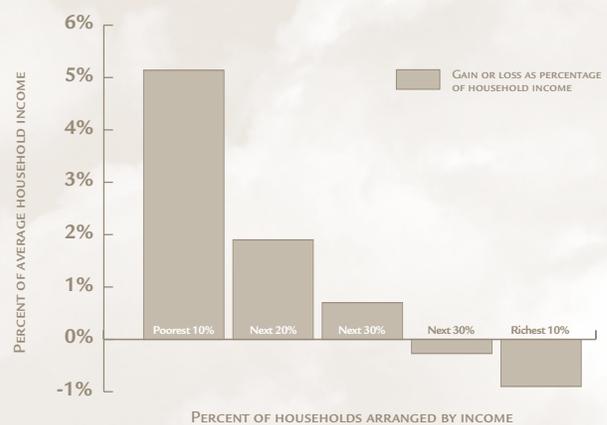
year to every woman, man, and child in the United States.

Citizens would pay into the fund according to their consumption of fossil fuels, and get paid back from it according to the principle of equal ownership of the carbon storage capacity of the atmosphere. Those who consume more fossil fuels would pay more into the trust than they receive in dividends at the end of the year; those who consume less would receive more than the amount they paid into it.

Lower-income households generally would come out ahead, since they consume less fossil fuel (and less of most things) than upper-income households. With the carbon fees set to cut emissions enough to meet the Kyoto target, the net impact of the sky trust would be to raise the net income of the poorest 10% of U.S. families by roughly five percent, while lowering the net income of the richest 10% of families by one percent.

This outcome reflects the fact that in the current system, where pollution is “penalty-free,” some people are generating a lot more of it than others. The sky trust redresses this inequality, while creating incentives for energy conservation. It thereby aligns equity with sustainability.

EFFECTS OF THE SKY TRUST ON THE DISTRIBUTION OF INCOME



# THE RIGHT TO A CLEAN AND SAFE ENVIRONMENT

## AT HOME

*“All persons are born free and have certain inalienable rights. They include the right to a clean and healthful environment.”*

—Constitution of the State of Montana

*“Each person has the right to a clean and healthful environment, as defined by laws relating to environmental quality, including control of pollution and conservation, protection and enhancement of natural resources.”*

—Constitution of the State of Hawaii

*“The people shall have the right to clean air and water, freedom from excessive and unnecessary noise, and the natural, scenic, historic, and esthetic qualities of their environment; and the protection of the people in their right to the conservation, development and utilization of the agricultural, mineral, forest, water, air and other natural resources is hereby declared to be a public purpose.”*

—Constitution of the Commonwealth of Massachusetts

*“The people have a right to clean air, pure water, and the preservation of the natural, scenic, historic and esthetic values of the environment.”*

—Constitution of the State of Pennsylvania

## AND ABROAD

*“All residents enjoy the right to a healthy, balanced environment.”*

—Constitution of Argentina

*“All citizens shall have the right to a healthy and pleasant environment.”*

—Constitution of Korea

*“Everyone shall have the right to a healthy and ecologically balanced human environment and the duty to defend it.”*

—Constitution of Portugal

*“Every person shall have the right to an environment which is not detrimental to his or her health or well-being.”*

—Constitution of the Republic of South Africa

# The Road Ahead



Across the nation and around the world, community organizations, policy makers, and even private business leaders have begun to talk about the need for sustainable development. Rising concerns about environmental issues such as urban sprawl, deforestation, the loss of biodiversity, and the contamination of our air and water are spurring the search for collaborative solutions that can marry the interests of diverse sectors and communities. To be in harmony with the earth, we must create harmony in the economy and society.

Yet a key aspect of economic and environmental sustainability often goes unmentioned: the need to reduce poverty and inequality. Unequal societies tend to grow more slowly, partly because of their diminished human capital and partly because of the negative impacts of social conflict. At the same time, unequal societies tend to consume more resources, partly because the ability to shift environmental burdens onto less advantaged, less vocal, and less visible groups leads to less concern about the overall extent of pollution and environmental damage.

The natural assets approach outlined here offers a way to bring together the movements for environmental sustainability and social justice, by adding new dimensions to both. Expanding the natural capital held by the poor can reduce poverty and improve the environment. Building wealth rather than simply redistributing income can bring about lasting reductions in poverty. Natural asset building can and must be part of an integrated approach that also builds other types of assets: human, financial, and social capital. Boston's Dudley Street Neighborhood Initiative organized resistance to the dumping of waste in vacant lots, thereby building social capital that enabled the community to make new claims on resources and generate new access to finance. The Dudley Street example, however, makes it clear that while we might celebrate community initiative, communities cannot do it on their own. The city-bequeathed power of eminent domain, ensuring community control of the land, as well as the support of foundations and other non-profit institutions, was key to the organization's success.

The need to obtain public and institutional support is not surprising, for the advances of the poor in gaining other sorts of assets have come from similar alliances. Low-income communities have gained better access to financial capital through the hard work of community activists to end redlining by banks, by a Community Reinvestment Act that gave community groups

new access to credit, and by the creation of foundation-supported intermediaries that could channel funds in appropriate ways.

New institutional arrangements are possible and necessary. Brownfields redevelopment agreements can transform contaminated and idle lands into community assets, enhancing the power of communities to chart their own futures. The growth of markets for certified wood products, together with new forest stewardship initiatives, can empower low-income forest workers to move beyond timber harvests to ecosystem management. Movements for environmental justice and proposals like the sky trust for distributing the revenues from skyborne carbon storage can translate the principle of equal rights to the air and water into a reality.

Getting from here to there will require new policy frameworks, new research, and new political alliances in order to mount persuasive cases in both policy circles and the court of public opinion. To influence further shifts in thinking and policy, social movements will need to draw on the experience of environmental justice organizations that have spent more than a decade empowering communities, protecting health, and revitalizing urban and rural areas.

In a world where more and more people are troubled by rising inequality and a sense of disconnection from each other and the environment, natural asset building may help forge a new approach to poverty reduction, community empowerment, and environmental sustainability.



# Resources

## FURTHER READING:

Peter Barnes and Rafe Pomerance, *Pie in the Sky: The Battle for Atmospheric Scarcity Rent*. Washington, D.C.: Corporation for Enterprise Development, 2000.

James K. Boyce and Barry Shelley, eds., *Natural Assets: Democratizing Environmental Ownership*. New York: Russell Sage Foundation Press, 2001.

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Peter Medoff and Holly Sklar, *Streets of Hope: The Fall and Rise of an Urban Neighborhood*. Boston: South End Press, 1994.

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Edward N. Wolff, "Recent Trends in Wealth Ownership, 1983-1998." Working Paper No. 300, Jerome Levy Economics Institute, April 2000.

Arlene K. Wong and Lisa Owens-Viani, "Brownfields Redevelopment: Meeting the Challenges of Community Participation." Working Paper No. 2000-03, Pacific Institute, 2000.

## ON THE WORLDWIDE WEB:

Alternatives for Community and Environment: <http://www.ace-ej.org/>

Center for Community Action and Environmental Justice: <http://www.ccaej.org/>

Center for Popular Economics: <http://www.PopularEconomics.org/>

Centre for Science and the Environment: <http://www.oneworld.org/cse/>

Corporation for Enterprise Development: <http://www.cfed.org/>

EcoJustice Network: <http://www.igc.org/envjustice/>

Environmental Defense Fund Scorecard: <http://www.scorecard.org/>

Environmental Justice Resource Center: <http://www.ejrc.cau.edu/>

Environmental Protection Agency, Environmental Justice Program: <http://www.epa.gov/swerosps/ej/>

Forest Stewardship Council: <http://www.fsc.org/>

Institute for Southern Studies: <http://www.southernstudies.org/>

Pacific Institute for Studies in Development, Environment, and Security: <http://www.pacinst.org/>

Political Economy Research Institute: <http://www.umass.edu/peri/>

# NOTES



**THE NATURAL ASSETS PROJECT**, based at the Political Economy Research Institute of the University of Massachusetts, Amherst, is a collaborative initiative launched with support from the Ford Foundation. The project aims to promote critical analysis and discussion of the potential for building natural assets—individual and social wealth based on natural resources and ecosystem services—to advance the goals of poverty reduction, environmental protection, and environmental justice.



**THE POLITICAL ECONOMY RESEARCH INSTITUTE (PERI)** was founded at the University of Massachusetts, Amherst, in 1998. PERI's mission is to facilitate research, graduate education, and outreach in the area of policy-relevant political economy. To this end, PERI supports research by faculty and graduate students, provides visiting professorships and post-doctoral fellowships, organizes collaborative research projects, and holds workshops and conferences. The Institute is committed to conducting and disseminating research to inform policy makers and grassroots activists who are trying to improve living standards and to create a more just, democratic, and ecologically sustainable world.



**THE CENTER FOR POPULAR ECONOMICS (CPE)** is a national non-profit collective of political economists that teaches economic literacy to activists for progressive social change. CPE's programs and publications demystify economics and provide alternatives to mainstream analyses, emphasizing the centrality of class, race and gender in analyzing how the economy works.

## ABOUT THE AUTHORS



**James K. Boyce** directs the Program on Development, Peacebuilding, and the Environment at the Political Economy Research Institute at the University of Massachusetts, Amherst. He is the co-editor, with Barry Shelley, of *Natural Assets: Democratizing Environmental Ownership* (Russell Sage Foundation Press, 2001), an outcome of the Natural Assets Project, and the author of *The Political Economy of the Environment* (Edward Elgar Publishing, 2001).

**Manuel Pastor** directs the Center for Justice, Tolerance, and Community at the University of California, Santa Cruz. His most recent book, *Regions That Work: How Cities and Suburbs Can Grow Together* (University of Minnesota Press, 2000), co-authored with Peter Dreier, Eugene Grigsby, and Marta Lopez-Garza, examines issues of urban sprawl, poverty reduction, and environmental sustainability. He is currently working on issues of environmental justice with support from the California Endowment and the California Policy Research Center, and has published articles on this topic in *Social Science Quarterly*, *Economic Development Quarterly*, *The Journal of Urban Affairs* and *Urban Affairs Review*.