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Sustainability as a Means of Improving Environmental Justice

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The purpose of this article is to explain why environmental justice provides much of the foundation for sustainable development, and to show how sustainability can improve our ability to achieve environmental justice.

Part I explains a basic but often unrecognized truth about environmental policy: environmental pollution and degradation, sooner or later, harms humans. Both sustainable development and environmental justice respond to this problem, though in somewhat different ways. As Part I also explains, sustainable development suggests a broader set of tools to address this problem than are often employed for environmental justice.

Part II shows four broad approaches by which sustainability can improve environmental justice. These approaches are taken from a recent book, *Acting as if Tomorrow Matters: Accelerating the Transition to Sustainability*,¹ to which the authors of this article contributed. The book grows out of the only nongovernmental project in the United States that systematically and comprehensively reviews U.S. sustainability efforts.² In this most recent book, a total of fifty-two contributing authors reviewed U.S. efforts over the past two decades, described the motivating factors, or drivers, for the progress the United States has made, identified obstacles,

¹ JOHN C. DERNBACH ET AL., *ACTING AS IF TOMORROW MATTERS: ACCELERATING THE TRANSITION TO SUSTAINABILITY* (2012).

² For previous reviews of U.S. sustainability activities, see *AGENDA FOR A SUSTAINABLE AMERICA* (John C. Dernbach ed., 2009); *STUMBLING TOWARD SUSTAINABILITY* (John C. Dernbach ed., ELI Press 2002); and John Dernbach & the Widener University Law School Seminar on Law and Sustainability, *U.S. Adherence to Its Agenda 21 Commitments: A Five-Year Review*, 27 ENVTL. L. REP. (Envtl. L. Inst.) 10504 (1997).

and explained how to overcome those obstacles and accelerate progress. The contributing authors to this project each have expertise in a particular aspect of sustainability (e.g., sustainable land use, climate change, green building); they are well aware of the specific ways in which the abstract ideals of sustainability are being translated into reality in specific places, what works and what does not work, and how existing practices can be improved. Two decades after nations of the world agreed to work toward sustainability at the 1992 U.N. Conference on Environment and Development, or Earth Summit,³ these efforts, each growing out of different fields of expertise and experience, are beginning to merge together to form the foundations of a “bottom-up” sustainability movement. Green building, sustainable land use, and sustainable transportation efforts, for example, are no longer necessarily conducted separately, but are increasingly implemented together in recognition of the interdependency of each policy area. By extrapolating from the patterns in these efforts, the book provides a roadmap for speeding up U.S. sustainability efforts that can, in turn, inform efforts toward environmental justice. Part II shows how these four broad approaches—more and better sustainability options, law for sustainability, visionary and pragmatic governance, and an American movement for sustainability—can enrich and strengthen the quest for environmental justice.

³ The international commitment took two forms. Nations endorsed a nonbinding plan for sustainability known as Agenda 21. U.N. Conference on Environment and Development (UNCED), Agenda 21, U.N. Doc. A/CONF.151.26 (1992), *available at* <http://www.un.org/esa/dsd/agenda21/>. They also endorsed the Rio Declaration, a nonbinding set of principles for sustainable development. UNCED, Rio Declaration on Environment and Development, U.N. Doc. A/CONF.151/5/Rev.1, 31 I.L.M. 874 (June 3–14, 1992), *available at* <http://www.unep.org/Documents.Multilingual/Default.asp?documentid=78&articleid=1163>.

I. THE ENVIRONMENTAL JUSTICE FOUNDATION OF SUSTAINABLE
DEVELOPMENT

A. *Environmental Degradation Adversely Affects Human Well-Being*

Environmental degradation or pollution almost always hurts human beings sooner or later. Environmental pollution hurts individuals and communities, forcing them to breathe unhealthy air, drink tainted water, or ingest toxic chemicals. Environmental degradation also damages the vast ecological commons on which life depends. In fact, in today's more crowded world, with higher levels of economic activity and corresponding environmental injuries, adverse human impacts are more certain, more direct, and often greater in scale.

Moreover, as the World Commission on Environment and Development explained in the landmark report, *Our Common Future*,⁴ poverty and environmental degradation reinforce each other. People in poverty engage in a variety of environmentally destructive activities, including deforestation as well as farming and grazing on degraded lands, because they have no other choice to survive. Yet environmental degradation, in turn, keeps these people in poverty. The poor tend to live on the least arable land, breathe the least healthy air, and drink contaminated water, all of which contribute to high rates of illness and disease, resulting difficulties with employment, and challenges in completing even a basic course of public education.

⁴ WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT, *OUR COMMON FUTURE* 43 (1987).

The linkages between environmental degradation and adverse impacts on human well-being can be illustrated in a variety of ways, but three examples are particularly instructive.

First, in 2001, the Millennium Ecosystem Assessment was launched to provide a sound scientific basis for decision makers to understand the consequences of ecosystem changes on humans and to analyze options for conserving ecosystems. The conceptual framework for this project is set out in its first report, *Ecosystems and Human Well-being*,⁵ which explains that “[i]ndigent, poorly resourced, and otherwise disadvantaged communities are generally the most vulnerable to adverse ecosystem change.”⁶ The report explains well-being and poverty as being at opposite ends of a continuum. Human well-being, it says, is based on “the basic material needs for a good life, freedom and choice, health, good social relations, and personal security.”⁷ Poverty is “pronounced deprivation in well-being.”⁸ Human well-being, in turn, depends on three different kinds of ecosystem services. These are products (e.g., food, fresh water, resources), “regulating services” (e.g., a stable climate, water purification by wetlands), and “cultural services” (e.g., recreation, cultural heritage, spiritual).⁹ Improved quality of these ecosystem services can enhance human well-being, as can improved access to them. Similarly, lower quality ecosystem services, and reduced access to them, move

⁵ CONCEPTUAL FRAMEWORK WORKING GROUP, MILLENNIUM ECOSYSTEM ASSESSMENT, *ECOSYSTEMS AND HUMAN WELL-BEING: A FRAMEWORK FOR ASSESSMENT* (2003) available at http://pdf.wri.org/ecosystems_human_wellbeing.pdf.

⁶ *Id.* at 71.

⁷ *Id.* at 74.

⁸ *Id.*

⁹ *Id.* at 78.

people toward poverty.¹⁰ Since that time, a great deal of conceptual and empirical work has refined our understanding of the benefits of ecosystem services,¹¹ but the basic conclusions stated in the 2001 report about the relationship between environmental degradation and poverty have not changed.

Second, in spite of its name, environmental law was never intended solely to protect the environment. In fact, the primary purpose of environmental law is to protect human health.¹² The Federal Clean Air Act,¹³ for example, has significantly reduced emissions of many health-damaging pollutants.¹⁴ Yet there is a long way to go. In 2010, the National Research Council published a report, *Hidden Costs of Energy: Unpriced Consequences of Energy Production and Use*, that quantified in economic terms the otherwise uncalculated costs of many forms of energy production.¹⁵ The hidden costs of energy production from coal are particularly telling because they are calculated from a point in time, 2005, that is 35 years after the enactment of the modern Clean Air Act in 1970, a statute that has been devoted in large measure to reducing those impacts.

¹⁰ *Id.* at 70-71.

¹¹ DERNBACH, ET AL., *supra* note 1, at 168-69.

¹² Celia Campbell-Mohn, *Objectives and Tools of Environmental Law*, in ENVIRONMENTAL LAW: FROM RESOURCES TO RECOVERY § 4.1 (Celia Campbell-Mohn et al. eds., 1993).

¹³ 42 U.S.C. §§ 7401-7671 (2006).

¹⁴ DERNBACH, ET AL., *supra* note 1, at 16-17.

¹⁵ COMMITTEE ON HEALTH, ENVIRONMENTAL, AND OTHER EXTERNAL COSTS AND BENEFITS OF ENERGY PRODUCTION AND CONSUMPTION, NATIONAL RESEARCH COUNCIL, HIDDEN COSTS OF ENERGY: UNPRICED CONSEQUENCES OF ENERGY PRODUCTION AND USE (2010) [hereinafter HIDDEN COSTS OF ENERGY].

The study calculated the aggregate damages associated with emissions of sulfur dioxide, nitrogen oxides, PM 10 (ordinary particulate matter) and PM 2.5 (fine particulates)—all pollutants that are regulated under the Act, and all but one of which (PM 2.5) that have been regulated since 1970.¹⁶ The aggregate damages were \$62 billion (in 2007 dollars), or an average of \$156 million per power plant; 406 plants were included in the study.¹⁷ “More than 90% of monetized damages are associated with premature human mortality, and approximately 85% of damages come from [sulfur dioxide] emissions,” the report states.¹⁸ These hidden costs—health costs that are not borne by the power plants themselves—amount to 3.2 cents per kilowatt hour (kWh) of electricity produced at these plants. Climate change impacts, which would raise these figures, are not included.¹⁹

Finally, the impacts of human-induced climate change are being more and widely experienced, especially in developing countries.²⁰ Around the world, governments, nongovernmental organizations, and individuals have been organizing to respond to the threat of climate change as a matter of justice.²¹ Most of the greenhouse gas emissions are coming from wealthier developed nations and richer people in developing nations, but the world’s poorest people, who have done little to cause the

¹⁶ 40 C.F.R. Part 50.

¹⁷ HIDDEN COSTS OF ENERGY, *supra* note 15, at 6.

¹⁸ *Id.* at 340.

¹⁹ *Id.*

²⁰ See U. N. DEV. PROGRAMME (UNDP), HUMAN DEVELOPMENT REPORT 2007/2008, FIGHTING CLIMATE CHANGE: HUMAN SOLIDARITY IN A DIVIDED WORLD, *available at* http://hdr.undp.org/en/media/HDR_20072008_EN_Complete.pdf.

²¹ See, e.g., ERIC A. POSNER & DAVID WEISBACH, CLIMATE CHANGE JUSTICE (2010).

problem, are experiencing the impacts most gravely.²² The harshest impacts of climate change are predicted for parts of the world where millions of already impoverished people struggle to survive, such as the Horn of Africa.²³ The poor lack the financial resources to respond to climate change's threats. Wealthier people in developed countries can afford to pay more for rising food prices caused by local droughts, but poor people starve when food prices rise.²⁴

For many poor countries as well as people living in poverty, climate change is not a future problem; it is already the cause of great human suffering and death. The World Health Organization has estimated that as of 2004, global warming was causing more than 140,000 excess deaths annually, a number that is projected to increase in the years ahead.²⁵ Tens of millions of poor people around the world have already suffered from droughts and floods, which are increasing in intensity and frequency in a warming world. Although science cannot attribute recent disastrous floods and droughts solely to human-induced climate change, the increase in intensity and frequency of damage now being experienced is predicted by climate change science.²⁶

²² HUMAN DEVELOPMENT REPORT 2007/2008, *supra* note 20.

²³ *Id.* at 3.

²⁴ UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE, CLIMATE CHANGE: IMPACTS, VULNERABILITIES AND ADAPTATION IN DEVELOPING COUNTRIES 5 (2007).

²⁵ World Health Organization, Climate Change and Health (Jan. 2010), <http://www.who.int/mediacentre/factsheets/fs266/en/index.html>.

²⁶ *Future Climate Change*, U.S. EPA, <http://www.epa.gov/climatechange/science/futurepsc.html> (last visited Sept. 3, 2012).

In the name of climate justice, representatives of some of the world's most vulnerable people are appearing more frequently at the annual meetings of the conference of the parties to the U.N. Framework Convention on Climate Change, demanding that high-emitting countries reduce their emissions to their fair share of safe global emissions.²⁷ There are also growing demands by developing countries for funding to help developing countries adapt to climate change problems, which, they insist, they did not cause. These demands are likely to grow in the years ahead. Many organizations in the United States, including the National Association for the Advancement of Colored People, have put forward climate justice initiatives.²⁸

This analysis has significant consequences for our understanding of environmental degradation. Most obviously, it means that environmental pollution and degradation are not “just about the environment”—impacts that we can care about or not, as we please. In fact, one of the basic errors that many people make is to assume that environmental quality is simply a subjective preference that has little, if any, social consequence. The truth is quite different.

²⁷ See, e.g., Madhur Singh, *Indian Environment Minister Says U.N. Climate Talks Will Not Produce Binding Deal This Year*, WORLD CLIMATE CHANGE REPORT (Bloomberg BNA), Feb. 4, 2011.

²⁸ *About the NAACP Climate Justice Initiative*, NAACP, <http://www.naacp.org/pages/climate-justice-initiative-about> (last visited Sept. 3, 2012).

B. Two Responses

Sustainable development and environmental justice are both intended to address the significant impact that environmental degradation has on human health and well-being.

1. Sustainable Development

The World Commission on Environment and Development's report, *Our Common Future*, first brought the concept of sustainable development to public attention. In fact, this report contains the most frequently quoted one-sentence definition of sustainable development: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."²⁹ Like all one-sentence definitions, this definition emphasizes some key truths about the subject: 1) sustainable development is a form of development, and 2) sustainable development is about ensuring that both present and future generations can meet their needs. And like all one-sentence definitions, it requires further explanation.

At the U.N. Conference on Environment and Development, or Earth Summit, in Rio de Janeiro in June 1992, nations of the world endorsed Agenda 21, an ambitious and comprehensive but nonbinding plan of action to realize sustainable development within their own

²⁹ OUR COMMON FUTURE, *supra* note 4, at 16.

boundaries and in their international activities.³⁰ These nations also endorsed the Rio Declaration, a statement of 27 principles, to guide sustainable development.³¹

The Rio Declaration, Agenda 21, and related documents provide a deeper understanding of development, the term that “sustainable” is intended to modify. Development has three substantive components: peace and security, economic development, and social development or human rights. The basic idea is that if these three components are being achieved, people will be able to live with freedom and opportunity, and will likely enjoy a high quality of life. However, traditional notions of environmental protection do not figure in this understanding of development.³² That failure, according to *Our Common Future*, causes both environmental degradation and poverty.³³

While sustainable development includes the three substantive components of development—peace and security, economic development, and social development/human rights³⁴—it also includes principles of environmental protection and restoration. Instead of development at the expense of the environment and adversely affected people, sustainable development would protect and restore the environment and would not disadvantage or hurt other people.³⁵ By definition, then, sustainable

³⁰ Agenda 21, *supra* note 3.

³¹ Rio Declaration, *supra* note 3.

³² This analysis is further developed in John C. Dernbach, *Sustainable Development as a Framework for National Governance*, 49 CASE W. RES. L. REV. 1, 9 (1998).

³³ See *supra* text accompanying note 4.

³⁴ Dernbach, *supra* note 32, at 17-24.

³⁵ *Id.* at 24-29.

development is environmentally-just human development. Sustainable development's ultimate purposes, moreover, are very similar to those of general development—freedom, opportunity, and quality of life. But these goals are not only to be achieved for the present generation; they are also to be achieved for future generations.³⁶

The Rio Declaration recognizes that environmental degradation hurts other people. According to the “polluter pays” principle in that declaration, “[n]ational authorities should endeavor to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution.”³⁷ In the examples described above, involving the distribution of air and water pollutants, ecosystem services, and the impacts of climate change, the costs of pollution and degradation are being borne primarily, if not entirely, by individuals and communities that did not cause them. Sustainable development is specifically directed at remedying such problems, which would improve human well-being.

To restate the essential point: sustainable development is about achieving forward-looking development and environmental protection or restoration at the same time. Development and environment, properly understood, are of equal importance.³⁸ Thus, sustainable development is not another name for environmental protection at all costs, nor is it another name for sustainable growth.

³⁶ *Id.* at 29-31.

³⁷ Rio Declaration, *supra* note 3, Principle 16.

³⁸ For many in the environmental community, this is a controversial point, because they see the environment as foundational for everything else. For many in the business community, this is a controversial point, because they would privilege development over the environment if there is any conflict between the two goals.

2. Environmental Justice

Environmental justice (“EJ”) is similarly motivated. EJ is based on the conviction that minority and low-income individuals, communities, and populations should not be disproportionately exposed to environmental and public health hazards and they should share in making the decisions that affect their environment.³⁹ The U.S. Environmental Protection Agency (EPA) defines environmental justice as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, culture, education, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.”⁴⁰

Environmental law has, to some degree, improved U.S. environmental quality, including air and water quality, for virtually everyone.⁴¹ On its face, environmental laws do not make distinctions based on race or social class. Still, problems remain with respect to protections and enforcement in traditionally disempowered communities. Environmental justice focuses on the disproportionate impacts that low-income and minority communities often experience because of weak

³⁹ Michael B. Gerrard, *Environmental Justice and Local Land Use Decisionmaking*, in *TRENDS IN LAND USE LAW FROM A TO Z: ADULT USES TO ZONING 126* (Patricia E. Salkin ed., 2001).

⁴⁰ *Environmental Justice*, U.S. EPA, at <http://www.epa.gov/compliance/environmentaljustice/index.html> (last visited Aug. 8, 2012).

⁴¹ DERNBACH, ET AL., *supra* note 1, at 15-17, 24-26.

enforcement of environmental laws; the cumulative effects of multiple industrial facilities in their communities that may or may not be analyzed or controlled in the permitting process; and their inability to participate effectively in various governmental processes involving environmental matters, including initial land use decision making and siting.⁴²

In the 1970s and 1980s, a variety of grassroots movements were formed to draw attention to environmental racism in the setting of otherwise locally unwanted land uses such as hazardous waste facilities, landfills, and industrial uses in close proximity to communities of color. Many view the 1982 protest in Warren County, North Carolina, as the beginning of the environmental justice movement. There, people protested the state's plan to dump more than 6,000 truckloads of PCB-contaminated soil into a "secure" landfill. Galvanized by community struggles countrywide, activists have created a multiracial grassroots movement aimed at achieving environmental and social equality.⁴³ Following a number of influential studies indicating that hazardous waste landfills were disproportionately located near low-income, minority populations, the EPA created the Office of Environmental Equity (now the Office of Environmental Justice) in 1992.⁴⁴

The National Environmental Justice Advisory Council, a federal advisory committee, was established by charter in 1993 (and rechartered in 2008) to bring together representatives of community, academic,

⁴² ZYGMUNT J.B. PLATER ET AL., ENVIRONMENTAL LAW AND POLICY: NATURE, LAW, AND SOCIETY 377-78 (4th ed. 2010).

⁴³ Cf. Patricia Salkin, *Environmental Justice and Land-Use Planning: American Planning Association PAS Quick Notes, No. 26, June 2010*, Albany Law School Research Paper No. 5, 2011-2012, (June 1, 2010), available at <http://ssrn.com/abstract=1827195>.

⁴⁴ Environmental Justice: Basic Information, U.S. EPA, <http://www.epa.gov/environmentaljustice/basics/ejbackground.html> (last visited Aug. 30, 2012).

industrial, environmental, indigenous, and government groups at all levels to provide advice to the EPA on integrating environmental justice principles into EPA actions.⁴⁵ In 1994, President Bill Clinton issued Executive Order 12898, mandating that federal government agencies incorporate environmental justice as part of their missions.⁴⁶ More recently, EPA Administrator Lisa Jackson has made environmental justice a priority, announcing Plan EJ 2014⁴⁷ (to mark the 20th anniversary of President Clinton's 1994 executive order) to further help the EPA integrate environmental justice into the agency's programs, policies, and activities. The effort is designed to result in a strategy, not a regulation, to protect health in communities overburdened by pollution; to empower communities to take action to improve their health and environment; and to establish partnerships among local, state, tribal, and federal organizations to achieve healthy and sustainable communities.⁴⁸ One of the principles of the EJ movement is that communities impacted by environmental degradation need the tools—access to information and skill building—to be able to advocate for themselves. Since 1994, the EPA's Environmental Justice Small Grants Program has awarded more than 1,200 grants totaling more than \$20 million to help affected communities

⁴⁵ See *Environmental Justice*, NATL. ENVTL. JUSTICE ADVISORY COUNCIL (Aug. 16, 2012) <http://www.epa.gov/environmentaljustice/nejac/index.html>.

⁴⁶ Fed. Actions to Address Env'tl. Justice in Minority Populations and Low-Income Populations, Exec. Order 12,898, 59 Fed. Reg. 7,629 (Feb. 11, 1994).

⁴⁷ *Plan EJ 2014*, U.S. EPA, available at <http://epa.gov/environmentaljustice/plan-ej/index.html> (last visited Sept. 3, 2012).

⁴⁸ *Id.*

create self-sustaining, community-based partnerships that will continue to improve local environments throughout the United States.⁴⁹

While the EPA definition of environmental justice and Executive Order 12898 focus on potential disproportionate harm from environmental hazards, environmental justice also requires that environmental benefits be equitably distributed. Because minority and low-income populations tend to live in the most polluted areas, environmental benefits such as cleaner air and water tend to be lower there than in more affluent areas.⁵⁰ Yet EJ should result in better public health, higher environmental quality, and improved job opportunities in those communities.⁵¹

C. *Sustainable Development as a Helpful Way of Framing Environmental Justice Issues*

⁴⁹ *Environmental Justice Small Grants Program Fact Sheet*, U.S. EPA (Feb. 2011), available at <http://www.epa.gov/environmentaljustice/resources/publications/factsheets/fact-sheet-ej-small-grant-01-2011.pdf>.

⁵⁰ See E. Donald Elliott, *A Cabin on the Mountain: Reflections on the Distributional Consequences of Environmental Protection Programs*, 1 KAN. J.L. & PUB. POL'Y 5, 7 (1991) (“In my judgment, minorities and the poor probably benefit disproportionately from environmental protection measures.”); William K. Reilly, *Environmental Equity: EPA's Position*, 18 EPA J. 18, 22 (1992) (“It is undeniable that minorities usually benefit from—are, indeed, the chief beneficiaries of—more general efforts to protect the environment.”), available at <http://heinonline.org/HOL/LandingPage?collection=journals&handle=hein.journals/epajrnl18&div=11>.

⁵¹ Richard J. Lazarus, *Pursuing “Environmental Justice:” The Distributional Effects of Environmental Protection*, 87 NW. U. L. REV. 787, 793 (1992).

Both sustainable development and environmental justice are based on recognition that environmental degradation harms human beings as well as the environment, and that environmental improvement also helps other humans. In consequence, both sustainable development and environmental justice necessarily have a distinct and essential ethical or moral dimension: people should not be acting in ways that hurt other people.⁵² On the other hand, they are not the same. Although generalizations about differences can be overstated or even wrong, sustainable development connotes or emphasizes several points that are less prominent in many analyses of environmental justice.

First, because sustainable development is a form of development, it automatically includes the entire sphere of economic and social development, raising basic questions about acceptable forms of economic development anywhere. While many environmental justice issues are framed in terms of impacts of a particular project or activity in a particular place (say, a coal-fired power plant or a municipal waste incinerator in a place with a substantial minority or low-income population), sustainable development raises basic systemic questions about, for example, the way we produce energy and materials, how much of them are consumed in the host community versus how much are shipped off to other parts of the country or the world, and the health and economic cost-benefit analysis for the community.

Second, sustainable development focuses on all laws and policies that affect environmental quality and the availability of natural resources.

⁵² *See, e.g.*, THE MORAL AUSTERITY OF ENVIRONMENTAL DECISION MAKING: SUSTAINABILITY, DEMOCRACY, AND NORMATIVE ARGUMENT IN POLICY AND LAW (Martin Gilroy and Joe Bowersox eds., 2002).

It takes into account more traditional environmental regulation, to be sure, because these laws provide a basic minimum standard of protection for human health and the environment. But sustainable development also takes into account laws that have no explicitly stated environmental or public health protection purpose, but that can nonetheless adversely affect them. These laws include, but are not limited to, subsidies, tax law, and transportation and land use laws. In partial contrast, environmental justice tends to focus on corrections in the enforcement and administration of existing environmental laws, supplemented by civil rights laws.

Third, while sustainable development principles give special emphasis to the poor, racial and ethnic minorities, and indigenous peoples, it applies to all humans. Sustainable development principles would change development activities that affect everyone, not only particular classes or groups of people. The environmental harms that are of interest in sustainable development are harms that affect everyone, and the environmental benefits sustainability can provide are benefits that impact everyone. Of course, one of the basic goals of sustainability is elimination of large-scale poverty. It is also quite clear that the overwhelming brunt of environmentally damaging activities, including climate change, is felt by those with the least responsibility for causing them and the least ability to adapt or avoid these harms. In addition, legal rules and social structures that privilege some people over others or that produce benefits at the expense of harming others affect everyone in some way. Still, sustainability tends to be focused on the overall condition of all humans in broader ways than environmental justice.

These differences in tone and emphasis—broad patterns of development, all laws and policies that affect the environment, and all people—provide a way of understanding how sustainability can enrich our ability to achieve environmental justice. Indeed, in many ways, it already is.

II. HOW SUSTAINABILITY CAN IMPROVE U.S. ENVIRONMENTAL JUSTICE

How can sustainable development help speed up progress in achieving environmental justice in the United States? Helpful answers can be found by examining the patterns in U.S. sustainability efforts to date, and extrapolating from those patterns, as explained in *Acting as if Tomorrow Matters*. Seen through the lens of this book, there are four broad paths forward. The examples used below to demonstrate these paths are all illustrative; they do not exhaustively describe the many possibilities that exist.

A. *More and Better Sustainability Choices*

While the U.S. has made only limited progress toward sustainability over the past two decades, it has nonetheless made some advances. A basic reason is that more sustainable choices are now easier to make and more attractive than previously. Consumers have options they did not previously have (e.g., hybrid cars, certified organic food). Builders and contractors who seek to build a more sustainable building do not have to figure it out from scratch; they can employ the U.S. Green Building Council's Leadership in Energy and Environmental Design

(“LEED”) certification program,⁵³ or they can simply follow programmatic guidelines produced by state and local governments.

In fact, many of the most basic obstacles to sustainability exist when there is no easily available alternative or the alternative costs too much, is not reliable, does not work very well, or the local government has failed to make accommodations for the advancement of sustainability through modernization of its local land use regulatory system. For instance, while LEED certification has gained popularity as an initiative for new buildings, it has not been used as much in existing buildings. Yet, nearly all of these existing buildings use substandard insulation, heating, ventilation, air conditioning, lighting, and appliances. Energy efficiency retrofits in the nation’s 130 million homes could reduce home energy use by as much as 40% and energy bills by \$21 billion annually.⁵⁴ The lack of “straightforward and reliable information,” large upfront costs, and the lack of businesses and skilled workers to do retrofits all prevent the existence of a large-scale effective market.⁵⁵

A good endpoint here would be a market in which it is as easy to find such “green” contractors as it is to find a plumber. The U.S. Department of Energy is working to create a national market like this—for both residential and commercial buildings—through the Better Buildings Initiative and other programs. The Better Buildings Initiative is a set of investments under the American Recovery and Reinvestment Act as well

⁵³ DERNBACH et al., *supra* note 1, at 155-72.

⁵⁴ MIDDLE CLASS TASK FORCE & COUNCIL ON ENVIRONMENTAL QUALITY, RECOVERY THROUGH RETROFIT 1 (Oct. 2009), *available at* http://www.whitehouse.gov/assets/documents/Recovery_Through_Retrofit_Final_Report.pdf.

⁵⁵ *Id.*

as tax incentives and other tools that attempts “to make commercial and industrial buildings 20% more energy efficient by 2020 and accelerate private sector investment in energy efficiency.”⁵⁶ According to a study for the U.S. Green Building Council and others that was performed by the Political Economy Research Institute, retrofitting commercial buildings could create 114,000 new jobs and save businesses more than \$1.4 billion annually.⁵⁷

This market is not likely to work effectively, however, unless it also includes creative means of financing energy efficiency upgrades and renovations that do not require a homeowner or business owner to pay for the entire cost up front. Such a solution is found in Property Assessed Clean Energy (“PACE”) programs. Through PACE, a municipality provides loans for energy efficiency and other clean energy improvements to homeowners and businesses within its jurisdiction. In return, the borrower agrees to an individual tax or other assessment on its real property sufficient to repay the loan plus interest over the term of the loan. As of this writing, twenty-eight states and the District of Columbia have adopted laws authorizing PACE programs.⁵⁸ Unfortunately, the Federal Housing Finance Authority created a major obstacle to PACE programs, at least for residences, when it announced that a PACE assessment will

⁵⁶ *Better Buildings*, U.S. DEPARTMENT OF ENERGY, <http://www1.eere.energy.gov/buildings/betterbuildings/> (last visited Aug. 2, 2012).

⁵⁷ LANE BURT ET AL., A NEW RETROFIT INDUSTRY: AN ANALYSIS OF THE JOB CREATION POTENTIAL OF TAX INCENTIVES FOR ENERGY EFFICIENCY IN COMMERCIAL BUILDINGS AND OTHER COMPONENTS OF THE BETTER BUILDINGS INITIATIVE 2 (June 13, 2011), available at <http://www.usgbc.org/ShowFile.aspx?DocumentID=9531>.

⁵⁸ *Property Assessed Clean Energy (PACE)*, DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY http://www.dsireusa.org/documents/summarymaps/PACE_Financing_Map.ppt (last visited Aug. 2, 2012).

disqualify a home for receiving a Fannie Mae or Freddie Mac mortgage.⁵⁹ There appear to be other ways to structure PACE programs to avoid this and other problems.⁶⁰ Private financing, at least for commercial upgrades, also appears to be a viable option.⁶¹

Energy efficiency has significant environmental justice implications. While it can reduce the amount of money that needs to be spent on household energy,⁶² access to the costly retrofitting can be problematic. Low-income persons tend to live in the least efficient housing. They also spend a much higher fraction of their income on energy (14%, as opposed to 3.5% by other households).⁶³ There is a longstanding Weatherization Assistance Program for low-income persons “to increase the energy efficiency of dwellings owned or occupied by low-income persons, reduce their total residential energy expenditures, and

⁵⁹ *FHFA Statement on Certain Energy Retrofit Loan Programs*, FEDERAL HOUSING FINANCE AUTHORITY (July 6, 2010), available at www.fhfa.gov/webfiles/15884/PACESTMT7610.pdf.

⁶⁰ See generally Prentiss Cox, *Keeping PACE?: The Case Against Property Assessed Clean Energy Financing Programs*, 83 U. COLO. L. REV. 83 (2011) (arguing that PACE programs should be substantially restructured).

⁶¹ Justin Gillis, *Tax Plan to Turn Old Buildings ‘Green’ Finds Favor*, N.Y. TIMES, Sept. 19, 2011, available at <http://www.nytimes.com/2011/09/20/business/energy-environment/tax-plan-to-turn-old-buildings-green-finds-favor.html>.

⁶² MAINE MCEACHERN AND JILL VIVIAN, *CONSERVING THE PLANET WITHOUT HURTING LOW-INCOME FAMILIES: OPTIONS FOR FAIR ENERGY-EFFICIENCY PROGRAMS FOR LOW-INCOME HOUSEHOLDS 5* (Apr. 2010), available at <http://www.elc.uvic.ca/press/documents/Conserving-planet-without-hurting-low-income-families-April2010-FINAL.pdf>.

⁶³ MARILYN A. BROWN ET AL., *TOWARDS A CLIMATE-FRIENDLY BUILT ENVIRONMENT 50* (2005), available at http://www.pewclimate.org/docUploads/Buildings_FINAL.pdf.

improve their health and safety,”⁶⁴ but it has reached only about a quarter of eligible homes.⁶⁵ Scaling up this program has proven to be a challenge.⁶⁶

The renovation and upgrade of existing residential and commercial buildings to reduce their needed energy use is but one example of the many ways in which creation of more sustainable options can improve environmental justice. A combination of training, jobs, and resources will benefit EJ populations in lower income communities in the same way as other populations when it comes to energy efficiency. Another strategy aimed at realizing energy efficiency is designing communities so that the less affluent have easy and inexpensive transportation from their residences to schools, places of employment, shopping centers, and other frequented locations. Since families may give higher priority to transportation costs, the expenses required for automobile ownership often make it difficult for low-income persons to qualify for a home mortgage. Because these families are thus renters, they do not accumulate capital in their homes through mortgage payments.⁶⁷ More and better sustainability options in the area of energy would improve environmental justice.

⁶⁴ 42 U.S.C. § 6861(b)(2006). For the statutory authority for the program, see 42 U.S.C. §§ 6862-73(2006).

⁶⁵ BROWN ET AL., *supra* note 63, at 50-51.

⁶⁶ John C. Dernbach & Marianne Tyrrell, *Federal Energy Efficiency and Conservation Laws*, in *LAW OF CLEAN ENERGY: EFFICIENCY AND RENEWABLES* 25, 36-37 (Michael B. Gerrard ed. 2011) (describing “state hiring freezes and furloughs brought on by the recession, as well as the need to train new people,” as contributing to delays).

⁶⁷ John C. Dernbach & Scott Bernstein, *Pursuing Sustainable Communities: Looking Back, Looking Forward*, 35 *URB. LAW.* 495, 515 (2003).

B. Law for Sustainability

Our environmental laws have improved air and water quality over the last several decades, and have had positive environmental and public health consequences.⁶⁸ Environmental justice efforts, in turn, have improved the effectiveness of these laws. But environmental regulation is not the only source of law that can protect the environment. Laws expressly encouraging or requiring specific kinds of economic development that tend to be more sustainable than conventional economic development have aided much of the progress made in the United States toward sustainability in recent years. Like economic development laws in general, these laws are not just about business development; they also create community-based jobs that pay a living wage. In addition, they reduce the use of fossil fuels, foster new technology, and reduce pollution.⁶⁹ These legal rules and policies fall into a variety of categories. Some of these laws require an increase in more-sustainable activity, such as recycling or renewable energy. Renewable energy portfolio standards, which require an increase in the percentage of electricity produced from renewable energy, have that effect.⁷⁰ Other laws create a structure in which a more-sustainable activity can flourish. The U.S. government's 2000 organic food certification rules⁷¹ have led to rapid growth in the

⁶⁸ DERNBACH, *supra* note 1, at 15-38.

⁶⁹ See John C. Dernbach, *Creating the Law of Environmentally Sustainable Economic Development*, 28 PACE ENVTL. L. REV. 614 (2011).

⁷⁰ *Renewable Portfolio Standards Fact Sheet*, U.S. EPA, http://www.epa.gov/chp/state-policy/renewable_fs.html (last visited Aug. 2, 2012).

⁷¹ 7 C.F.R. Part 205 (2012).

organic food industry,⁷² and local governments across the country are now promoting urban agriculture and community gardens as a way of producing fresh and healthy local food to benefit the surrounding community. Still other laws remove impediments to sustainability. The tax credit for corn ethanol production, for example, encouraged a questionable source of energy production from both an environment perspective and a food security perspective, but it was allowed to expire at the end of 2011.⁷³ In many cases, governments have used traditional economic development tools such as tax incentives, grants, and siting assistance, to attract renewable energy and other more sustainable industries.⁷⁴ In other cases, these laws and policies help overcome market barriers for more-sustainable activities, or are needed to overcome these barriers. The PACE program, described above, is one example. Still other laws require the creation and public disclosure of information (e.g., greenhouse gas emissions⁷⁵), and thus put pressure on businesses to operate in a more-sustainable manner. Finally, there are economic development laws that have environmental and job creation benefits. The

⁷² See, e.g., William A. Knudson, *The Organic Food Market* (Strategic Mktg. Inst., Working Paper No. 01-0407, Apr. 2007), available at <http://expeng.anr.msu.edu/uploads/files/39/organicfood1.pdf>.

⁷³ Robert Pear, *After Three Decades, Tax Credit for Ethanol Expires*, N.Y. TIMES, Jan. 1, 2012, http://www.nytimes.com/2012/01/02/business/energy-environment/after-three-decades-federal-tax-credit-for-ethanol-expires.html?_r=1.

⁷⁴ See, e.g., Jonathan Rosenbloom, *Government Entrepreneurs: Incentivizing Sustainable Businesses as Part of Local Economic Development Strategies*, in GREENING LOCAL GOVERNMENT: LEGAL STRATEGIES FOR PROMOTING SUSTAINABILITY, EFFICIENCY, AND FISCAL SAVINGS 19 (Keith H. Hirokawa & Patricia E. Salkin eds. 2012).

⁷⁵ Consolidated Appropriations Act, Pub. L. No.110–161, 121 Stat. 1844 (2008).

Consumer Assistance to Recycle and Save (“CARS”) Act of 2009⁷⁶ (or “cash for clunkers” law), helped create demand for new cars in the middle of the 2008 recession by providing a cash rebate for the purchase of more fuel-efficient cars.⁷⁷

These kinds of economic development offer more opportunities and better pay for low- and middle-skilled workers than the national economy as a whole. A 2011 study by the Brookings Institution and Battelle’s Technology Partnership found 2.7 million existing jobs in the “clean economy,” which it defined to include energy and resource efficiency, agricultural and natural resources conservation, renewable energy, greenhouse gas reduction, recycling, environmental management, and education and compliance.⁷⁸ This part of the economy employs more people than the fossil fuel industry and is more manufacturing intensive than the rest of the economy. The clean economy is also, perhaps most importantly, capable of considerable growth,⁷⁹ which can provide increased opportunities for minority and low-income populations to perform such jobs in their own communities. Median wages are 13% higher in green energy jobs than the overall economy average.⁸⁰ The

⁷⁶ Supplemental Appropriations Act of 2009, Pub. L. 111–32, § 1302, 123 Stat. 1859 (2009).

⁷⁷ Marianne Tyrrell & John C. Dernbach, *The “Cash for Clunkers” Program: A Sustainability Evaluation*, 42 U. TOL. L. REV. 467, 468 (2011).

⁷⁸ BROOKINGS INSTITUTION & BATTELLE TECHNOLOGY PARTNERSHIP PRACTICE, *SIZING THE CLEAN ECONOMY* 4, 16 (2011), *available at* http://www.brookings.edu/~media/Files/Programs/Metro/clean_economy/0713_clean_economy.pdf.

⁷⁹ *Id.* at 5.

⁸⁰ *Id.* at 4.

report also found that “[a]lmost half of all jobs in the clean economy are held by workers with a high school diploma or less, compared to only 37.2% of U.S. jobs.” At the same time, “only 32.5% of clean economy jobs are weak-wage (paying below the U.S. median) and low-skill, compared with 41.4% nationally.”⁸¹

One of the most important things governments at all levels can do is scale up the economic development programs that have worked to improve environmental quality, reduce energy use, build businesses, and create jobs. Many of these programs have been working in some states and municipalities, but not all states and municipalities. Recycling laws are an example. Recycling waste creates twice as many jobs as landfilling waste,⁸² and there is abundant evidence that state recycling laws have created jobs.⁸³ It follows that efforts to increase the recycling of waste, properly designed, can increase jobs. State energy efficiency and renewable energy laws, scaled to the national level, can have the same effect.

At the international level, laws that encourage sustainable practices will help reduce injustice in the world because they will require consideration of not only environmental but also economic and social goals. Yet, global sustainability problems create particularly challenging justice issues because of the separation in time and space between those

⁸¹ *Id.* at 23–24.

⁸² GEORGE GOLDMAN & AYA OGISHI, **THE ECONOMIC IMPACT OF WASTE DISPOSAL AND DIVERSION IN CALIFORNIA** 13 (2001), available at <http://are.berkeley.edu/extension/EconImpWaste.pdf>.

⁸³ See, e.g., John Dernbach and the Widener University School of Law Seminar on Climate Change, *Next Generation Recycling and Waste Reduction: Building on the Success of Pennsylvania’s 1988 Legislation*, 21 WIDENER L. J. 285 (2012).

who are causing the problem and those who are most vulnerable to the harshest health and environmental impacts of unsustainable development. Enlightened principles of sustainable development will help correct the failure of some traditional economic development projects to prevent adverse impacts on environmental resources and the poor.

However, at the global scale in particular, sustainable development policies need to also consider questions of distributive and retributive justice to assure that the burdens and benefits of policies will be fairly allocated among those who are causing a problem and those who will benefit from sustainable policy implementation. For instance, for climate change there is no way to duck the question of how to fairly allocate greenhouse gas emissions reduction targets and responsibilities for adaptation among rich and poor countries and high-emitting individuals around the world. And so new laws to encourage sustainable development, at the global scale in particular, will need to consider global equity and fair allocation of responsibilities to reduce global sustainability problems that are already putting people at risk around the world.

C. Visionary and Pragmatic Governance

Sustainability requires not only laws that support and encourage the right kind of activities, but also an approach to governance that is at once visionary and pragmatic. That is, governance must be based on a long-term view of where the country is going and what challenges it faces, but also must be attentive to new information and developments on the ground.

Addressing the complexities of climate change provides an example of the kind of governance that is needed. The comprehensive

climate change legislation that passed the House of Representatives in 2009 would have established a cap-and-trade system to reduce greenhouse gas emissions from covered sources 17% below 2005 levels by 2020 and 83% below 2005 levels by 2050.⁸⁴ The legislation, in other words, would have committed the U.S. to steadily reducing greenhouse gas emissions over a period in which ten presidential elections will be held. Such legislation is visionary because it approaches the climate change issue over a long time horizon, but it would not survive that many presidential elections unless there is also a strong bipartisan consensus that greenhouse gas emissions need to be reduced dramatically.

The commitments that government makes, in other words, must be kept in substantially the same form from election to election, from decade to decade. Substantial and continuing public investments in research and development are needed, for instance, particularly on technologies in which the private sector may be reluctant to invest. Visionary governance is also needed to allow businesses to make large energy sector investments without fear of being whipsawed by swings in policy.⁸⁵ Of course, pragmatism is also needed because adjustments often need to be made in policy. Still, the adjustments should be made in a manner that is consistent with the goals and structure of the overall policy.

⁸⁴ American Clean Energy and Security Act, H.R. 2454, 111th Cong. § 304(a)(1) (passed by House of Representatives June 26, 2009).

⁸⁵ Norine Kennedy, Letter to Editor, *Our Energy Choices and Climate Change*, N.Y. TIMES, July 29, 2012, at A18 (explaining that “governments can help” to realize the potential for new energy technologies “by keeping markets open for trade and investment, protecting intellectual property rights, and creating a stable, predictable environment where companies can plan and invest for the future”), available at <http://www.nytimes.com/2012/07/30/opinion/our-energy-choices-and-climate-change.html>. Ms. Kennedy is vice president for environment and energy of the U.S. Council for International Business

This kind of governance is especially important for climate change because, as previously explained, the people who will be most greatly and negatively affected will almost certainly be the poor, and particularly those in developing nations. But this issue has other manifestations as well. As the climate changes, many states and local governments are preparing climate change adaptation plans. A basic challenge in such plans is to find out who is most vulnerable to floods, heat waves, and other manifestations of a warming climate, which will include low-income persons, the elderly, and racial and ethnic minorities.⁸⁶ Of course, it is not enough to prepare such plans; local governments must engage vulnerable populations, educate decision makers, and continuously monitor and respond to events.⁸⁷ Planning of any kind requires government to be visionary in some basic way, and adaptation planning by definition requires pragmatic responses to events as they unfold.

D. A National Sustainability Movement

An environmental justice movement has existed in the United States for at least several decades. Early leadership emerged from grassroots movements challenging a variety of facilities that adversely affected communities of color.⁸⁸

⁸⁶ Lora A. Lucero, *Building Equity into Communities: Sustainability and Climate Justice*, in GREENING LOCAL GOVERNMENT, *supra* note 74, at 277, 283-84.

⁸⁷ *Id.* at 284-87.

⁸⁸ CLIFFORD RECHTSCHAFFEN ET AL., ENVIRONMENTAL JUSTICE: LAW, POLICY & REGULATION 3 (2d ed. 2009).

Other bottom-up movements related to sustainability, including climate change and climate justice, are influencing that environmental justice movement. And they are part of a larger movement that is organized in various ways under the banner of sustainability, including sustainable agriculture and green jobs. This movement has led to many of the changes related to environmental justice and sustainability that have occurred over the past two decades. As this sustainability movement grows, it should encourage even more visionary and pragmatic governance, enable other and greater changes in law and policy that will support and encourage sustainability, and help foster the development of even more and better choices.

III. CONCLUSION

Sustainable development can broaden and deepen the quest for environmental justice by ensuring that economic and social development provides better opportunities for the poor, people of color, and other disadvantaged persons. It also can improve environmental justice by making a wide range of legal and policy tools available for that purpose. By creating more and better sustainability choices, employing law on behalf of sustainability, using visionary and pragmatic governance, and building a large bottom-up movement based on our ethical responsibilities to others, governments at all levels, as well as businesses, nongovernmental organizations, and individuals, can help to realize environmental justice goals more effectively and completely.

In his famous letter from a Birmingham jail, Martin Luther King, Jr. wrote: "Injustice anywhere is a threat to justice everywhere. We are

caught in an inescapable network of mutuality, tied in a single garment of destiny. Whatever affects one directly affects all indirectly."⁸⁹ Similarly, injustice in any form, even environmental injustice, is still injustice. Environmental injustice is thus also, in a fundamental sense, "a threat to justice everywhere." By strengthening our ability to achieve environmental justice, sustainability can play a fundamental role in achieving justice everywhere.

⁸⁹ Martin Luther King, Jr., Letter from Birmingham Jail, 1 (1963), *available at* http://web.cn.edu/kwheeler/documents/letter_birmingham_jail.pdf.

