
Introduction

This book is about how to seize the opportunities that sustainability presents and how to minimize the risks of the environmental challenges that confront us. It is, in other words, about making environmentally sustainable development happen in the United States as rapidly as possible and on the broadest scale. On most issues, we already have a pretty good idea of *what* to do.¹ This book focuses instead on *how* to achieve sustainability. It provides a broad conceptual framework for fostering sustainability in all aspects of American life.

Over the past several decades, we have made some progress toward sustainability but have also encountered major obstacles. This book teases out those patterns that account for the progress, albeit modest, that we have made to date. Similarly, it describes the obstacles to sustainability. The book then outlines an approach for accelerating progress and overcoming obstacles.

While this book is about the environment, it is also about a great deal more. It is about the kind of community, nation, and world in which we wish to live. It is about how to maintain and improve our quality of life, protect our freedom, and create opportunity. And it is about our children and grandchildren and all those who will live here after we are gone.

Sustainable development—or sustainability for short—will make the United States more livable, healthy, secure, and prosperous. Policies that promote sustainability will reduce risks to our national security, improve our economic efficiency and productivity, enhance our health and communities, improve the lives of the poorest among us, and foster greater human well-being. Sustainability can provide these multiple benefits while protecting and restoring the environment for our generation and for generations that follow.

This book is premised on a fact that we have known for a long time, and which we ignore at our peril. The National Research Council opened its recent report on sustainability at the U.S. Environmental Protection Agency this way:

Everything that humans require for their survival and well-being depends, directly or indirectly, on the natural environment. The environment provides the air we breathe, the water we drink, and the food we eat. It defines in fundamental ways the communities in which we live and is the source for renewable and nonrenewable resources on which civilization depends. Our health and well-being, our economy, and our security all require a high quality environment.²

Americans tend to trace such thoughts back to great conservationists, including George Perkins Marsh, John Muir, Aldo Leopold, and Theodore Roosevelt. But they actually go back further, to the founding of the nation. Our first four presidents—George Washington, John Adams, Thomas Jefferson, and James Madison—owned farms or plantations. They differed in many ways (three were slaveholders, and one, Adams, was not), yet all were convinced that the health of the soil is essential to the health of the nation.³ After James Madison's presidency, he was elected as first president of the Agriculture Society of Albemarle, Virginia. In 1818, he gave an address to the society in which he explained that preservation of adjoining forests and woodlands, use of manure as fertilizer, horizontal plowing on hill sides, and other conservation techniques were all essential to ensuring soil fertility. Failure to do these things, he emphasized, meant degraded soil, low yield, and a weaker nation. The "happiness of our country," he added, depends not just on its "soil and climate" and its "uncrowded situation" but also on actions that maintain and enhance soil fertility.⁴

It was just such thinking—applied to a broader set of problems—that motivated the United States and other countries at the 1992 U.N. Conference on Environment and Development (known widely as the Earth Summit) in Rio. The twin problems addressed at the Earth Summit were high levels of global poverty and increasing environmental degradation. It was widely recognized that each problem helped to make the other worse; environmental degradation makes it hard for people to stay healthy and earn a living, and poverty deprives individuals of the time and resources needed to protect the environment.

Twenty years later, these problems are no less pressing. Our actions as a species and as a nation are not sustainable. The situation we face at the global level is both simple and daunting: humans are making greater demands for natural resources and causing widespread environmental degradation on a planet with a finite capacity to meet those demands or absorb their effects. In addition, some people have access to abundant resources at an affordable price, and some do not. Sadly, many conditions, including climate change, are now worse than they were two decades ago.

At Rio the countries of the world, including the United States, under the far-sighted leadership of President George H.W. Bush, endorsed a broad and ambitious plan to move toward sustainability (Agenda 21)⁵ and a set of principles to guide the effort (Rio Declaration).⁶ The United States endorsed this plan and these principles because, to a great degree, they were based on longstanding U.S. laws and policies. Indeed, sustainability is anchored in conservation concepts that have been employed in the United States for more than a century to preserve forests, soil, fish, and game.

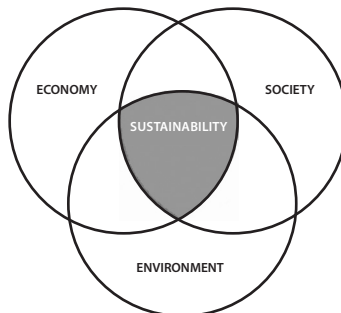
Sustainability Is

We use the terms “sustainability” and “sustainable development” more now than we did two decades ago. Still, it is far from clear that most of us understand what sustainability and sustainable development mean. For many, perhaps most, these are just vague words in the “green” vocabulary. For more than a few others, sustainability means something negative, like tree hugging. Yet sustainability is distinctive—and positive—in at least seven ways.

First, sustainability provides a framework for humans to live and prosper in harmony with nature rather than, as we have tended to do for centuries, at nature’s expense. It is about finding ways to make our goals for environmental protection, economic growth, peace and security, and social well-being mutually reinforcing—rather than treating environmental degradation as the necessary price of progress. It is about quality of life and well-being. Although the terms *sustainability* and *sustainable development* were first used in an environmental context, they are not about the environment alone or the environment before everything else. The Venn diagram in Figure 1 is a common way of expressing the nexus of environmental, social, and economic goals. These are sometimes also called the three pillars of sustainability. Corporate sustainability efforts are often described in terms of a triple bottom line of, for example, “profit, people, and planet.”⁷⁷

The three pillars and triple bottom line are used so often that a fourth dimension—peace and security—is often omitted. Yet most activities are difficult or impossible in the absence of peace and security. As the Rio Declaration states, “Peace, development and environmental protection are interdependent and indivisible.”⁷⁸ Some sustainability issues more obviously involve security than others. The use of petroleum for transportation, for instance, involves foreign oil supplies, and thus has national security implications. In this book, we discuss security when it is appropriate to do so, but more often we refer to three goals or the triple bottom line.

Figure 1
Sustainability and Three Circles



As Figure 1 suggests, the object of sustainability is to maximize the positive contribution of human activities to the environment, the economy, and society at the same time. The reuse and recycling of materials provides an example. If we buy things and then throw them out, we contribute to economic growth and job creation but the environmental impact is negative. If nearly everything is recycled or reused, on the other hand, we not only contribute to economic growth but also create more jobs than if materials were simply landfilled, save energy used to make and refine those materials that would otherwise be lost, and have almost no negative environmental impact. If we mined existing disposal facilities for metal and other materials, and converted the land to park or other use, we would have a positive environmental impact. Sustainability is not just about minimizing environmental damage; it is also about the restoration of environmental quality.

Sustainability is thus about *integrating* environmental protection and restoration into economic, social, and national security decisions and goals. If the risks of environmental degradation are accounted for, sustainability will be more efficient and less costly than making a development decision first and then figuring out what to do about the environment afterward, or addressing the environment as a costly add-on to a development project or manufacturing process. In principle, a dollar spent on sustainability will yield more benefits—and a greater variety of benefits—than a dollar spent only on economic development or the environment. In fact, sustainability is consistent with the fiscal discipline that current economic circumstances require. And for energy efficiency and conservation in particular, sustainability can, and usually does, also mean lower economic costs.

Second, sustainability focuses on both the short-term and long-term effects of decisions. The most widely accepted definition of sustainable development—“development that meets the needs of the present without compromising the ability of future generations to meet their own needs”⁹—captures this point precisely. It is reinforced by one of the principles in the Rio Declaration—intergenerational equity. It is also consistent with much American political rhetoric that focuses on protecting the interests of our children and grandchildren. Sustainability is inconsistent with decisions that lead to long-term debts or problems that can only be resolved, if at all, by future generations—such as the federal budget deficit, climate change, overpopulation, depletion of resources, destruction of biodiversity, and the global accumulation of toxic materials.

Third, sustainability is about exercising precaution and making commonsense decisions in the face of known or likely risks. Sustainable development is not based on what we want to believe or not believe; it is anchored in reality and risk. Because sustainability is premised in part on avoiding or limiting risks, it does not require complete certainty before we act. That is how we ordinarily behave, and we should treat risks related to sustainability in the same way.

Fourth, sustainability is also a moral, ethical, and even a religious issue, not just a matter of policy or law. Environmental quality and the availability of

natural resources directly affect human well-being; environmental damage hurts individuals, forcing them to breathe unhealthy air, drink filthy water, or ingest toxic chemicals. Environmental degradation also damages the vast ecological commons on which life depends. To address this problem, the Rio Declaration mirrors a basic principle of U.S. environmental law, stating that “the polluter should, in principle, bear the cost of pollution,” rather than imposing that cost on others or the environment.¹⁰ For those who recognize the existence of God, or another deity or force larger than themselves, environmental degradation also can be an offense against God, creation, or the natural order.

Fifth, sustainability is not directed just to government or industry, but to all parts of society, all ages, and all economic sectors. The Rio Declaration identifies public participation, access to information, and access to justice—key principles of American governance—as essential to sustainability.¹¹ It is also directed to individuals, not simply as participants in the development of government policy but also as consumers and users of goods and services. The problems are so large, and the opportunities so many, that virtually every individual, organization, institution, corporation, and government needs to contribute to a more-sustainable world.

Sixth, sustainability requires considerable innovation in all spheres of public and private life. Many of the legal, policy, and other tools we need to achieve sustainability do not yet exist, are only now being attempted, or have only been tried for a short time. Sustainability is an effort to change the environmental habits, scripts, and patterns that have dominated the American landscape over the past several decades, and even longer. Day after day, at home, at work, and in school, most of us act in many ways that are not environmentally sustainable. We will need to change those habits, either through the use of new technologies, new options for doing things, new or different infrastructure, new or modified laws, or changes in personal habits.

Seventh, sustainability’s objectives are human freedom, opportunity, and quality of life in a world in which the environment is protected and restored and in which natural resources are readily available. The objectives of sustainable development are in many ways the same as those of conventional development. It is easy to forget that sustainable development is, after all, a form of development. In *Our Common Future*, a landmark report on sustainable development, the World Commission on Environment and Development stated: “The satisfaction of human needs and aspirations is the major objective of development.”¹² International lawyer Rumu Sarkar explains that, “for most practitioners and theorists, the overall objectives of alleviating poverty and human suffering and of improving the human condition more generally are the desired end product of the development process.”¹³ She adds that, “development aims at enlarging the opportunities people have in their lives.”¹⁴ Amartya Sen, a professor of economics and philosophy at Harvard who has won the Nobel Prize in economics, describes development as a process that enlarges individual freedom.¹⁵

Sustainability Is Not . . .

To be clear about what sustainability *is*, we also need to make clear what sustainability is *not*. This is particularly important because many people believe that sustainability does not fit into their own view of the world or personal values and aspirations. As John Maynard Keynes once said, “the difficulty lies not with the new ideas, but in escaping from the old ones.”

Sustainability is not about less freedom and opportunity. In fact, it is about providing people choices they do not now have. In the broadest sense it includes the opportunity to enjoy a high quality of life regardless of income, without interference from environmental pollutants or climate change. On a more mundane level it includes the freedom to purchase affordably priced vehicles that obtain high gas mileage and the opportunity to get to school or work conveniently by walking, biking, or using mass transit. Or the ability to buy locally grown fruits and vegetables conveniently and for an affordable and fair price.

Sustainability is not about bigger government. While government needs to steer society in particular directions, sustainability cannot be accomplished by government or regulation alone. Government needs to repeal or modify laws that inhibit progress toward sustainability, and not simply adopt new laws. And while regulation has a role to play, sustainability is primarily about unleashing the creative energies of individuals, families, entrepreneurs, businesses, nongovernmental organizations, colleges and universities, and many others to make a contribution toward our collective present and future well-being.

Sustainability is not about mindless implementation of an international plan. As Agenda 21 made clear, sustainable development needs to be realized in the particular economic, natural, and historical settings of each country. The United States will not embrace sustainability because we agreed to it at an international conference or because we care about the environment. We will move toward sustainability only if it is more beneficial to us than conventional development. We will move toward sustainability only if—and then because—it makes both us and our descendants better off.

Sustainable development is not about economic development or economic growth for its own sake. Sustainability is also not the same thing as sustained economic growth, although sustainability and sustained economic growth can certainly occur at the same time. The ultimate objectives, again, involve human well-being and environmental quality. Economic development and economic growth are means to that end, but they are not ends in themselves. On the other hand, as already suggested, sustainable development does not mean a lower standard of living.

A Destination or a Journey?

Is sustainability a destination, or is it a journey? In a sense, it is both. Its goal is a society in which the ordinary effects of human activity protect and restore the

environment and minimize or eliminate large-scale poverty. That is plainly not the world we have today, and in that sense sustainability is a destination. To reach this destination, however, we must embark upon a long journey, one that is likely to take more than a generation.¹⁶ While it is appropriate to focus our efforts on the journey, we should nonetheless not lose sight of the destination.

The destination-versus-journey question goes to the heart of what sustainability means. In a world where a great many of our activities cause some environmental damage, actions that merely reduce our negative environmental impacts are better—and could be labeled as steps toward sustainability. By themselves, however, those steps may not represent true sustainability. To make that distinction clear, this book uses the term “more-sustainable” to describe an alternative that is better than business as usual, but not necessarily “sustainable.” A building that uses 25% less energy is a more-sustainable building, for example, but not the same as a “net zero energy” building or a building that uses renewable energy to produce more power than it uses.

In a fully sustainable society, the ordinary effect of human behavior will be to protect and restore the environment. We know that human societies will never be fixed and unchanging, but we hope to reach a point where changes within human society will always occur within the boundaries of sustainability.

However, words like “journey” and “destination” mask a hard fact about sustainability that is more challenging. If the destination were a fixed point, any progress we made toward sustainability would put us closer to the target. But sustainability is not a fixed target because it is constantly moving—or, worse, in many respects we are actually moving *away* from the target. Continuing and growing damage to the environment increases the distance between where we are and the goal of a sustainable society. To reach the destination, we need to first slow down the rate at which things are getting worse, then start making things better. When the destination is moving away from us even as we make progress toward it, it is possible to be farther away after we have started than before we began.

On issues where unsustainable activities continue to accelerate—and climate change is the most important example—there is a discrete and real risk that we will never catch up. Positive feedback loops for greenhouse gas emissions (for example, warming in the Arctic leading to large methane releases, which create more warming and more methane releases) could cause climate change to accelerate even more rapidly. At some point, climate change *could* outpace human mitigation efforts even if human societies around the world are doing everything they can to reduce their emissions.

That is the real challenge of progress toward sustainability: to make sustainability happen on a scale large enough, and at a pace fast enough, to overtake the rate at which things are getting worse. When we describe progress in this book, we are describing it in this context.

Sustainability Embodies American Values

The goals of sustainable development—human freedom, opportunity, and quality of life—are quintessential American goals. The American colonies sought independence for these purposes, and the new nation established a legal and economic system premised on their importance, endured a civil war to protect that system and expand its opportunities to others, and fought two world wars and numerous other conflicts to protect us and help make those same opportunities available to others. At Memorial Day ceremonies throughout the United States, veterans almost inevitably talk about preservation of freedom as a key reason they were proud to serve our country. In the decades ahead, with a growing global population and economy, and growing demands on our environment, sustainability can provide a foundation on which to base continued freedom, opportunity, and quality of life.

Sustainable development would lead to a stronger and more efficient America because we would be pursuing social, economic, environmental, and security goals in ways that are mutually reinforcing or supportive, not contradictory or antagonistic. The result would be a stronger, more efficient country that provides its citizens and their descendants increasingly more opportunities in a quality natural environment. In his 1818 address to the Agriculture Society of Albemarle, Virginia, James Madison described enhancement of soil fertility as a patriotic act. During World War II, the American public was encouraged to save energy and to recycle metal and rubber, so that these resources would be available for the war effort. In recent decades, Congress has adopted legislation to limit dependence on foreign oil and thus protect national security.

Sustainable development would also lead to a safer, more stable and secure world outside American borders. The world is deeply divided between the wealthy and the desperately poor, and there is a real risk of evolving toward an unstable world of haves and have-nots, with a huge global underclass. Such a world would pose serious threats to our security. None of the goals that this country has pursued around the world—peace and stability, human rights and democracy, expansion of trade and markets, environmental protection, or putting an end to hunger and extreme deprivation—can be accomplished if the world is not on a path of sustainable development. We can be quite sure that unsustainable development will lead to a world with less freedom, fewer opportunities, and lower quality of life.

The ethical and religious concerns that characterize the sustainability movement are also quintessentially American. The country's history is full of circumstances that combined national self-interest with doing the right thing. The Civil War did not simply preserve the Union; it also ended slavery. We created the national parks because of pride in our natural heritage and also for the public's benefit. We led the effort to create the United Nations to make both our country and the rest of the world more secure. The challenges of sustainability require a response that is similarly motivated. Moreover, the texts and beliefs of each of the world's major religions teach responsibility toward other humans as well as the environment.

Because unsustainable actions adversely affect others, more-sustainable actions are not simply better for us; they reflect our ethical and religious values. Greenhouse gas emissions from the United States, for example, do not adversely affect us alone; they have an even greater impact on developing countries that lack the money and technology to cope with drought, famine, and other effects of climate change. What we do about sustainability, in other words, is not simply a policy question or a question of national self-interest. It is also—and more fundamentally—about who we are, what we value, and how we fulfill our obligations to others.

Finally, sustainable development is not just about us, the current generation of Americans. It is, in the Constitution's words, about "ourselves and our posterity," our children, grandchildren, nieces, nephews—all of those not yet born who will someday inhabit this country. We pride ourselves on providing our descendants greater opportunities and a better quality of life. Sustainable development will do precisely that. Without it, we cannot assure our children and grandchildren a better life, and are likely to leave them a poorer one.

The United States has survived and prospered only because each generation looked after the next. When John Dernbach's maternal grandparents died in the years after World War II, their children had these words put on their gravestone: "They gave their today for our tomorrow." Art and Clara Retzlaff were not reformers or activists; they were hardscrabble people who knew war, poverty, and unemployment first hand, and who worked hard for their children. These words may connote more sacrifice than we are comfortable with today. But there is a bigger problem. We say we care about tomorrow, yet all too often our actions tell a different story. This book's title captures both the dissonance and the challenge: acting as if tomorrow matters.

Looking Back, Looking Forward

The 1992 Earth Summit is both a reasonable and imperfect date for marking a review of U.S. activities on behalf of sustainable development. It is reasonable because the United States made an international commitment to sustainability at the conference, and because that conference represented an endorsement of sustainability by virtually every nation in the world. It is imperfect because, as the following chapters describe, a great many steps toward sustainability in the United States were taken before the Earth Summit, and we need to acknowledge them. Across a broad range of topics—environmental and public health protection; population, consumption, and technology; poverty, unemployment, and social equality; development of the built environment; governance; public education and engagement; and international activity—the United States has made *some* progress in the two decades since the Earth Summit. On balance, however, Part I suggests that the sustainability destination is now farther away than it was in 1992.

Yet there is nonetheless an emerging sustainability movement in the United States. It includes dedicated practitioners in a wide variety of fields who have

thought deeply about what sustainability means in different contexts and why it is attractive, and whose day-to-day job is to make it happen, fix what doesn't work, and improve results. They are engaged in a wide variety of fields, including agriculture, energy, manufacturing, technology, community planning and development, business and industry, government, education, building construction, engineering, and law.

They understand that the global economy, population, and environmental degradation are all growing, and that there are huge unmet human needs due to extreme poverty throughout the world. They all see that we have no choice but to make economic development, job creation, environmental protection, and national security work together rather than against each other. And they seek to translate those basic realities into reduced risks and greater opportunities in the work that they do and in the way they live.

Across their many and varying activities, there are three broad patterns. First, they have been supported and encouraged by citizens, consumers, investors, students, parents, and other stakeholders. There is also growing support from a wide variety of corporations and nongovernmental organizations, including the religious and ethical community. Second, more-sustainable decisions have become easier to make because of the growing availability of more-sustainable alternatives, and these alternatives are increasingly attractive. And third, government lawmaking for the past two decades has emphasized economic development on behalf of sustainability—renewable energy and energy efficiency, tax incentives, and a wide range of other laws—and has not been limited to environmental regulation. These patterns are described in Part II.

To be very sure, there are also obstacles to greater progress. It is important to “call out” the forces and circumstances that stand in the way—partly to understand them, partly to recognize that legal and policy recommendations for environmental sustainability won't necessarily happen simply because they are based on good ideas. One set of practical obstacles is the sheer force of existing unsustainable habits—personal, social, organizational, and governmental—that are reinforced by both lack of urgency and uncertainty about what more-sustainable behavior would entail. Another set of obstacles are legal and policy impediments. They include laws and policies that support or encourage unsustainable development, and thus inhibit progress toward sustainability, as well as the lack of a bipartisan consensus about critical environmental issues. Finally, and perhaps most visibly, there are political obstacles—the direct opposition of influential economic interests and the growing economic and political influence of developing countries that are more interested in pursuing conventional development than sustainable development. These obstacles are discussed in Part III.

How do we build on the progress made to date, overcome these obstacles, and thus accelerate the transition to sustainability? Four broad approaches are needed. First, we need better sustainability choices—options that make even greater

progress toward sustainability than currently available options, and more options and tools for a greater number and variety of activities. Second, the United States needs to move from an almost exclusive reliance on environmental regulation to a greater variety of legal and policy tools, including economic development, the repeal of laws that foster unsustainable development, and the like. In addition, the United States needs to adopt legislation that directly and fully addresses climate change. Visionary and pragmatic governance for sustainability is a third needed approach—at all levels of government. This kind of governance requires a bipartisan national strategy that can guide the nation’s sustainability efforts over a long period, an equally strong commitment to research and development of innovative technology, an intensified focus on public education, and greater public participation in decisionmaking for sustainability.

Finally, and perhaps most fundamentally, to achieve the kind of effort needed to create a sustainable America, we need a national movement that builds on the many local, state, organizational, and sector-specific movements described in this book. The businesses, religious organizations, educational institutions, communities, families, individuals, government agencies, and others who work for sustainability on particular issues in specific places all do so for their own reasons, responding to their particular constituents. The integration of economic, social, environmental, and security goals lends itself to partnerships or coalitions of organizations and individuals that otherwise would not likely work together. For those discouraged by the rancorous state of national politics, this movement—which appears to be growing—provides reason for hope.

These four approaches—more and better choices, law for sustainability, visionary and pragmatic governance, and an American movement for sustainability—reinforce each other. A sustainability movement makes it more likely that the needed legal and governance changes will happen and encourages the availability of more-sustainable options and greater use of those options. Public satisfaction with more-sustainable options would, in turn, lead to even more choices and greater support for changes in law and governance that would further contribute to sustainability. Taken together, these four approaches provide a way to build on our progress to date, overcome obstacles, and thus accelerate the transition to a sustainable America. Part IV discusses these approaches.

The question in front of us is not whether we will make a transition to sustainability. Unsustainable activities cannot continue indefinitely and will come to an end sooner or later. Instead, the question is whether that transition will be smooth or jarring. By accelerating progress toward sustainability, and by overcoming the obstacles to its accomplishment, we can make that transition more seamless and constructive, and thus ensure a high quality of life for present and future generations. We can act, in short, as if we really believe that tomorrow matters.