

Sustainability

The Challenge of Going Green

by Richard A. Clarke, Robert N. Stavins, J. Ladd Greeno, Joan L. Bavaria,
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Responding to environmental problems has always been a no-win proposition for managers, report Noah Walley and Bradley Whitehead in “It’s Not Easy Being Green” (May–June 1994). Help the environment and hurt your business, or irreparably harm your business while protecting the earth. Recently, however, a new common wisdom has emerged that promises the ultimate reconciliation of environmental and economic concerns. In this new world, both business and the environment can win. Being green is no longer a cost of doing business; it is a catalyst for innovation, new market opportunity, and wealth creation.

The idea that a renewed interest in environmental management will result in increased profitability for business has widespread appeal. In a new green world, managers might redesign a product so that it uses fewer environmentally harmful or resource-depleting raw materials—an effort that if successful could result in cuts in direct manufacturing costs and inventory savings.

This new vision sounds great, yet it is highly unrealistic, Walley and Whitehead argue. Environmental costs are skyrocketing at most companies, with little chance of economic payback in sight. Given this reality, they question whether “win-win” solutions should be the foundation of a company’s environmental strategy.

Twelve experts assess both viewpoints and offer their comments.

Should “win-win” solutions should be the foundation of a company’s environmental strategy?

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Much of what is written or spoken about the reconciliation of economic and environmental concerns is oversimplified, and I agree with Noah Walley and Bradley Whitehead that this kind of discourse can create unrealistic expectations. But reconciliation is not a choice. A strong global economy is sustainable only if it integrates economic, social, and environmental well-being.

I disagree with the authors' viewpoint that win-win opportunities are insignificant, and with their skepticism about the value of a corporate environmental commitment. They point to the "enormous" and rising costs of environmental compliance, with no positive financial returns, as a reason to argue against any real benefits arising from going beyond compliance. But that argument ignores a key point: complying with environmental or any other law is usually not expected to yield a positive financial return.

Having said that, I do believe that the costs of environmental compliance are unnecessarily high. They are the result of a regulatory system that has become inefficient and ineffective. The solution is creative regulatory reform like that initiated by the Aspen Institute Series on the Environment in the Twenty-First Century and the eco-efficiency work of the President's Council on Sustainable Development. Many of the proposed reforms are aimed at significantly increasing the cost-effectiveness of compliance measures by reducing command-and-control approaches, increasing the flexibility for meeting standards, and relying on market-based incentives.

The authors look at win-win opportunities from the rather narrow viewpoint of going beyond compliance in reducing pollution from industrial processes. But a broader approach is necessary, one that focuses on basic changes in products, services, and business strategies

that offer opportunity financially as well as ecologically. The shift from building more power plants to increasing energy efficiency can benefit utility customers and shareholders as well as the environment.

Here at Pacific Gas and Electric, we have installed energy-efficient lighting, heating, and cooling systems in the new federal building in Oakland, resulting in annual cost savings of \$600,000 and environmental payoffs that come from saving nearly 6 million kilowatt-hours of energy each year. Among the many win-win pollution-prevention measures we are implementing is the recycling of materials we use—electric conductors, transformers, plastic gas pipe—with cost savings of several million dollars a year.

It is true that economic forces at work in industry are making it more difficult to integrate environmental excellence into a business strategy. Yet the authors choose to treat this challenge, and the lack of a framework for managers to address it, as somehow different from other business challenges that result from changes in the business environment, such as the quickening global economy, a shrinking labor pool, or changing technology.

We need a farsighted program and innovative, creative solutions to address the environmental challenge. We need a comprehensive, forward-looking approach in which current barriers and disincentives

are removed; appropriate incentives are provided; and fiscal, economic, environmental, and industrial policies are integrated and made mutually supportive.

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In the 25 years since the beginning of the modern environmental movement, the United States has spent more than \$1 trillion to address environmental threats caused by commercial activities. During the latter part of this period, the U.S. economy has shifted from approximate trade balance on a long-term basis to chronic trade deficit. The coincidence of these two trends has led many to suspect that environmental regulation is impairing the “competitiveness” of U.S. industry.

The conventional wisdom is that environmental regulations impose significant costs on private industry, slow productivity growth, and thereby hinder the ability of U.S. companies to compete in international markets. This loss of competitiveness is believed to be reflected in declining exports, increasing imports, and a long-term movement of manufacturing capacity from the United States to other countries in the world, particularly in “pollution-intensive” industries.

A more recent, revisionist view asserts that environmental regulations are not only benign in their impact on international competitiveness but may actually be a net positive force driving private business and the economy as a whole to become more competitive. This argument—articulated most prominently by the Harvard Business School’s Michael Porter—has generated a great deal of interest and enthusiasm among some influential policymakers, including Vice President Al Gore.

Now a heated debate has arisen around these two views. Noah Walley and Bradley Whitehead tend to endorse the conventional view of environmental regulations impairing economic competitiveness. In drawing on their extensive experience working with major corporations, they introduce some much-needed reality to the debate, but anecdotal evidence can take us only so far.

Together with my colleagues Adam Jaffe, Steve Peterson, and Paul Portney, I recently reviewed the statistical evidence from more than 100 academic and government studies that illuminate this ongoing debate. In our report, “Environmental Regulation and International Competitiveness: What Does the Evidence Tell Us?” we concluded that the truth lies somewhere between the two positions.

We found little to document the view that environmental regulation has had a measurable adverse effect on competitiveness. Although its long-run social costs—including productivity slowdown—may be

consequential, studies gauging the effects of environmental regulation on net exports, overall trade flows, and plant-location decisions have produced estimates that are small or statistically insignificant.

The picture is bleaker still for the tenet that environmental regulation stimulates innovation and competitiveness. Not a single empirical analysis lends convincing support to this view. Indeed, several studies offer important, if indirect, evidence to the contrary. Natural skepticism regarding this regulatory free lunch should remain unabated.

Rather than advocate either of the two extremes, policymakers should aim to establish environmental priorities and goals that are consistent with the real trade-offs that all regulatory activities inevitably require; that is, policymakers should base environmental goals on the careful balancing of benefits and costs. In so doing, policymakers should seek to reduce the magnitude of those costs by identifying and implementing flexible and cost-effective environmental policy instruments, whether of the conventional type or the newer, market-based breed.

“Policymakers should aim to establish environmental priorities and goals that are consistent with the real tradeoffs that

all regulatory activities inevitably require.” —Robert N. Stavins

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Walley and Whitehead offer many valuable insights, but their emphasis on the win-win mind-set in corporate environmental management circles does not ring true.

In discussing competitive advantage in the environmental realm, lines must be clearly drawn between activities driven primarily by shareholder value and those driven by regulations, liabilities, and public expectations. The authors' lack of a consistent focus on these distinctions leads to misunderstandings about industry's relations with the win-win school of thought.

A sharper picture of the real situation and aspirations of industry can be drawn in four areas:

1. *Compliance and competitiveness.* Most companies focus on compliance, not competitive advantage—for good reason. Environmental managers would welcome a world in which they could “search exclusively for win-win solutions.” In reality, however, they

concentrate on ensuring compliance with current environmental regulations, remediating environmental problems caused by past operations, and anticipating the impact of proposed regulations.

As Walley and Whitehead note, costs in those areas are often enormous, dwarfing potential win-win opportunities. But the authors don't make it clear that when a Texaco, for example, invests \$7 billion in compliance and emissions reductions, a primary motive is to protect its franchise to operate. Recent fines (\$5 million against United Technologies, for example) and criminal enforcement (in 1993, 135 individuals received criminal fines and jail time in environmental cases prosecuted by the Justice Department) show that noncompliance can have significant costs.

Moreover, the optimistic tone of today's corporate environmental rhetoric reflects management's desire to give its stockholders a unifying vision for a complex array of environmental initiatives. Nevertheless, senior managers are fully aware that many compliance and remediation efforts won't increase—but will protect—shareholder value. They know that any serious discussion about gaining competitive advantage from environmental issues must emphasize future possibilities.

2. *It's never been easy to be green.* The authors claim that in the late 1980s and early 1990s, “companies were able to make easy, but often very significant, improvements” in areas such as emissions

reductions. The result, they say, is a belief that future gains will be as easy.

Most companies would be surprised to learn that their environmental achievements have been easy. After all, in the same period, those companies saw compliance costs soar.

3. *Keeping up with the Joneses.* Walley and Whitehead urge companies to enhance shareholder value by improving “the efficiency and effectiveness of environmental spending.” But their focus on industry-wide statistics for environmental expenditures obscures the key competitive opportunity in those expenditures. Historically, industry has adjusted to the cost of environmental mandates with price adjustments. Companies that can achieve superior efficiency and effectiveness in environmental spending will indeed find themselves in a classic win-win situation—meeting the non-business-driven expectations of the public and the government while besting their competitors’ cost structures.

“Just as the United States set an example with its early environmental legislation, other countries are now pioneering approaches in areas such as packaging and environmental reports.” —J. Ladd Greeno

4. *The rest of the world.* The authors focus exclusively on the U.S. environmental context. Increasingly, however, the international dimensions of environmental issues are shaping corporate environmental postures. Companies are taking steps to safeguard against environmental liabilities in countries where regulations are now embryonic. And they are examining how measures such as the European Union's Eco-Management and Audit Scheme will raise "threshold" environmental expectations throughout the world. Just as the United States set an example with its early environmental legislation, other countries are now pioneering approaches in areas such as packaging and environmental reports. As companies globalize their operations, they must account for these developments if they hope to manage environmental costs and opportunities.

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Walley and Whitehead contribute to the necessary exercise of sorting choices for the future of business, but they veer dangerously toward the shortsighted, operational view of the world that has gotten us into our current pickle. They ignore businesspeople's ability to think creatively, and they fail to consider the dimension of time. Similar

failures may underlie society's inability to understand the impact of technology and commerce on our quality of life and may impede our success as managers of this planet.

As anyone who has used a spreadsheet to construct a business plan knows, the power of unknown externalities increases beyond one year. Even internal forces over time can seem like fantasy as you create, through mathematical formulas inserted in neat boxes, projections eight, nine, or ten years out. Managers and consultants, trained in the science of computer-aided projections, are understandably more comfortable with knowns than with unknowns and with visible effects than with visions of the future.

But getting us out of the global mess we're in will require a panoply of tactics, technology, and innovative partnerships. It will call for the kind of management thinking that doesn't depend on charting known facts against other known facts. We must be willing to think high and wide. Sadly, we are paying for past sins, which doesn't seem fair and is going to be incredibly difficult to allocate, but failing to do so will surely spell disaster in the future—for companies and shareholders.

The Pollyanna view that going green is a win-win for all corporations at all times deserves to be refuted. For some companies in the short run, changing practices to ensure maximum environmental performance could spell economic disaster. There are some absolutes, however, on what will prove to be a landscape with few clear and

obvious short-term solutions to long-term problems. One is that the problem is profound and long term: we are consuming our planet. Even frogs, as the proverb relates, know not to consume the lily pad on which they sit. Ironically, frogs are now one of the indicator species facing possible extinction.

Some industries will bump into scarce resources sooner than others; the fishing industries in New England and the Pacific Northwest are aware they have bitten the hand that feeds them, and the hand is no longer extended. Insurance companies are realizing that their short-term costs are directly related to environmental degradation. Managers in other affected industries must grasp quickly the trade-offs available to them and act accordingly.

But most of the choices we as a society must make and businesspeople must make if their companies are to survive are far more complex with far less empirical decision-making support. Companies in some industries must challenge their reason for being, or their core competencies. Is an oil company in the oil business long term, or in the fuel business, or in the energy business? Is an automobile manufacturer a transportation company? Read carefully between the lines, Al Gore's book is much more than environmental happy talk; it is a challenge to industry to find solutions by thinking globally and long term.

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The use of the traditional business concept of value as the determinant of choices would set the environmental debate back decades. Moreover, calling shareholders the ultimate arbiters of value in this debate is guaranteed to increase the antagonism between environmental activists and businesspeople. That argument ignores concepts of value that include quality of life and resources more properly in the public domain. All participants in the debate must reach new levels of understanding, refuting traditional straw men. Shareholders are no longer just rich folks in Cadillacs; they are also churches, foundations, and retired teachers. Similarly, economic trauma is an enemy of the environment in both the short and the long run.

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Win-win is a wonderful concept. It implies that economic oxymoron, a free lunch. No wonder politicians and chief executives long to be told that environmental expenditures are good for business. And no wonder Walley and Whitehead are skeptical. Their article is likely to be less widely quoted than Michael Porter's account of business-boosting regulation, but it is closer to the truth.

Sometimes it is in the commercial interests of the company's shareholders to adopt higher environmental standards. Sometimes, too, companies make money because governments tighten environmental regulations. But those results occur in rather special circumstances.

For example, a few companies may make money by making products for that elusive creature, the "green consumer." But that strategy has problems. Consumers think "green" only when buying a limited range of goods. Besides, some "green" products don't work as well as the nongreen sort—think of detergents—but cost consumers more.

It may be in a company's commercial interest to raise its standards mainly for defensive reasons. In most countries, the cost of disposing of toxic waste has been rising; the legal liabilities for pollution have become tougher; and companies are increasingly at risk of liability for past contamination. Fear, not greed, has driven most corporate environmental policies.

Politicians would like a more inspiring tale to tell than this. They would like to say that environmental regulation can actually improve corporate competitiveness. So it can, though again, not in the way they hope. For instance, companies selling pollution-control services, whether they be consultants, environmental lawyers, or businesses making water filters, find that tougher standards bring in more customers. Companies buying natural-resource-based raw materials may want environmental rules to reduce their treatment costs. Water companies gain if farmers must curb polluting runoff from their fields.

Companies that can already meet high standards may lobby to make them mandatory to keep out competitors. The big waste-treatment companies in Britain were aghast last year when the government twice postponed launching a new scheme for licensing the management of landfills. The higher standards of the licensing scheme required extensive capital investment, which small “cowboy” companies could not afford.

This game can be played internationally too. Germany’s “green dot” scheme, which requires the recycling of waste packaging, has benefited the German paper industry (by providing a large, cheap supply of recycled pulp) at the expense of Scandinavian producers of virgin pulp.

What the free-lunch brigade wants to hear, however, is that environmental rules actually persuade companies to take actions that are in their commercial interest but that they had not previously noticed. Remember the economist and his friend who thinks he sees a \$10 bill on the sidewalk? “It can’t be,” says the economist. “If it were, someone would have picked it up.”

Most of the \$10 bills to be had by reducing pollution or saving energy have either been picked up already or can be retrieved only at a cost. That cost may not be cash but management time. If a bright manager must look for ways to reduce waste output, he or she is not available for developing new markets or streamlining production.

It is not surprising that tougher environmental standards impose costs on companies. The aim of such standards, after all, is to force polluters to internalize costs previously inflicted on society. Or future generations inherit them. Environmental policies that are worth pursuing should be introduced for their own sake. To try to improve competitiveness by raising environmental standards is to risk the fate that typically awaits those who try to ride two horses at once.

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Walley and Whitehead greatly oversimplify Michael Porter’s argument (with which Al Gore may agree). In addition to rebutting a crude version of Porter’s “innovation hypothesis,” they fail to appreciate that his message is as much a prescription for government and a call for new regulatory strategies as a lesson for business. It is true that some environmentalists see seemingly endless environmental investment opportunities for corporations with positive rates of return and will gladly mandate them if companies won’t take them on.

But Porter understands that regulations have an economic cost. He simply says that properly constructed environmental standards may, while imposing costs, spur innovation and create business opportunities that offset all or some of the spending on pollution controls.

Porter identifies two kinds of “innovation offsets.” First, as companies face higher costs for polluting activities due to regulation, they will be pushed to consider new technologies and production approaches that might reduce the cost of compliance. Semiconductor makers, for instance, forced to abandon the use of ozone-layer-destroying CFCs as a solvent, have discovered several lower cost ways to clean computer chips. More dramatically, Porter suggests that while addressing environmental issues because of regulation, companies may develop entirely new products or processes.

This sort of significant innovation offset is most likely to be found where regulations focus corporate attention on serious environmental problems that others face or will soon face. Quick-responding companies can obtain “first mover’s” advantages by selling their solutions or unexpected innovations to others at home or around the world.

The strength of Porter’s hypothesis is that it builds on the dynamic reality of business. In today’s global marketplace, the ability to innovate and develop new technologies is a greater determinant of economic success than traditional factors of comparative advantage, such as obtaining low-cost components.

Protecting the environment, moreover, is not a zero-sum game. Many forms of pollution reflect under-utilized or wasted resources. Just as TQM helped companies identify untapped value, breakthrough

thinking in the environmental realm may enable companies to reap real rewards.

The structure of environmental programs should also be open to scrutiny. Indeed, the government must bear responsibility for establishing regulatory conditions that promote economic creativity and efficient business responses to environmental demands.

Regulatory programs should be flexible and performance oriented, or better yet, based on economic incentives like pollution charges.

Integrated regulatory systems that address air, water, and waste problems systematically and comprehensively are also more apt to lead to innovation offsets. By regulating with rather than against market forces, the government can help broaden the scope for environmental programs that spur innovation, reconciling, at least in part, the tension between society's desire for a cleaner environment and business's interest in profits and shareholder value.

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Walley and Whitehead are right: it's not easy being green. But it's also not easy anticipating markets, technologies, or social trends.

Management is a difficult profession, and the environment is becoming an increasingly important component in decision making.

Nor is a new, unsettling variable such as the environment unprecedented. Imagine the consternation of nineteenth-century industrialists faced with child labor laws or the dismay of their successors contemplating the new income tax, the Securities and Exchange Commission, and the Wagner Act, all of which dramatically altered their costs and changed their business practices. In such circumstances, farsighted and nimble companies prosper and laggards decline. Such is the way of a dynamic economic system.

Pollution prevention does pay a prompt return on investment—in some cases. And the authors correctly imply that this stream of opportunities hasn't been fished out yet. For example, 3M is still finding projects for its 3P program, now over 15 years old. Many other companies have barely begun to look. But despite such opportunities, solving the largest environmental problems will require huge investments whose principal economic payoff will be the right to continue in business. How efficiently these problems are recognized, analyzed, and addressed will determine the winners.

The costs of change must eventually end up in price; the consumer will pay. Shareholder values may be shifted among players, but they will not be massively destroyed. New capital, properly directed to environmental improvement, will still earn a positive return compared with the alternative of not investing. If it cannot, the proper strategy is to liquidate the business.

To strategize on this undulating playing field, the prudent manager needs to recognize its underlying forces. Despite some claims to the contrary, major environmental problems are not the creation of some anticapitalist elite. They are real, founded in science (often not well understood), and globally threatening. They are increasing because of rapid population growth and expanding economic activity. They can be solved only by a commonsense alliance of business, government, and environmentalists. Among these, only business has the resources of technology, finances, and organizational competence to implement the necessary changes. Herein lies great opportunity as well as great peril.

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Policymakers must recognize that environmental resources are often owned “in common” or not “owned” at all, and are therefore not priced or underpriced to those who use them. Examples include future fertility and waste-absorption capability of land; forest, wetlands, coral reefs, oceans, and other ecosystems; and the planet’s flora and fauna.

Where there is inadequate rationing through pricing, use will be profligate, and scarcity will go unrecognized. And because many resources seem “free,” access to them is regarded as an entitlement —“free as the air we breathe.”

As society sees its quality of life—or life itself—at risk, it will take steps to avert that risk. Companies can choose to “play,” or they can let others shape the game. A company that decides to play can incorporate the environment into strategic planning by taking certain steps:

1. Understand the critical environmental threats.
2. Determine how the company’s activities contribute to them.
3. Implement a remedial program wherever pollution prevention pays.
4. Aim research to develop more environmentally benign processes and products.
5. Design all new investment with environmental effects in mind.
6. Work with government and environmentalists to establish public policies and priorities that address major environmental threats as priorities, seeking a reasonable cost/benefit relationship.

7. Promote implementation mechanisms—especially economic signals (such as subsidies, user fees, and taxes)—to which business can respond efficiently.

The goal is an environmental protocol that is friendly to both business and society.

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The companies that survive the next 20 years will produce goods and services whose environmental effects are tolerable to all stakeholders. The environmental “value” of products will have to be weighed against their financial value and consumer preferences.

Environmental issues will have to be evaluated according to their relative importance. Executives, therefore, must develop a vision of how a sustainable company operates or at least of how to find the way to do it.

Only win-win companies will survive, but that does not mean that all win-win ideas will be successful. Managers need a methodology for discovering solutions that yield the greatest benefits.

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The Pollution Prevention Pays (PPP) program has been very popular in the Netherlands in recent years. A methodology called PRISMA was developed to trace prevention options. Most savings could be realized by increasing efficiency. Also, in our experience, the most extensive environmental benefits could be attained at only high costs.

Objections to PPP include: it measures benefits in terms of cash flow, not environmental impact; it doesn't account for all environmental issues; and improvements may not continue if they are costly.

Another recent development in the Netherlands and elsewhere in Europe is the environmental management system. But an EMS also yields only limited benefits. I prefer a total management system that can fulfill all managerial needs. Win-win solutions are possible for companies that develop a specific corporate environmental strategy,

design a system for reliable management information, and use a good methodology for evaluating environmental impact. Such a methodology includes:

1. Development of a long-term strategy based on a sustainable environmental philosophy.
2. Selection of specific, dominant environmental issues.
3. Definition of how problems and solutions must be judged.
4. Consideration of the best natural moment when making decisions about environmental improvements (investment, reallocation, or replacement, for example).
5. Selection of improvements with the highest chance of success.

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We have little basis on which to judge whether win-win environmental investment opportunities are rare or plentiful. Most U.S. companies don't have adequate tools to scan their operations for environmental opportunities or to prioritize or evaluate them in terms of contribution to shareholder value. Companies like Polaroid,

DuPont, and J.M. Huber, however, are demonstrating that rigorous analysis can uncover win-win opportunities. Such analysis looks at the full revenue- and cost-side contributions of environmental initiatives to shareholder value.

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Richard P. Wells**

Walley and Whitehead largely overlook the product-differentiation contribution of environmental initiatives to the revenue side of shareholder value. Product-differentiation opportunities arise not from domestic regulatory standards but from customer requirements reflected in supplier qualifications, international environmental standards, and competition in international markets, where environmental considerations are becoming increasingly important. In a 1991 survey of 85 companies, Abt learned that about 15% of the companies were beginning to find environmental product-differentiation opportunities, 25% were targeting only cost-

minimization opportunities, and 50% were focusing narrowly on compliance. The product-differentiation category should grow in the 1990s.

The authors also understate the cost-side benefits of environmental initiatives. A December 1993 report from TechKNOWLEDGEy Marketing Services in Orchard Park, New York, indicates that the environmental services industry has lost 56% of the paper value of its stock (or about \$50 billion) since its high in the spring of 1991. Why? Because U.S. industry redesigned its products and processes to reduce waste, and the expected market for waste-treatment and disposal services did not materialize. Resources that did not go into waste treatment and disposal have gone into more productive uses in the economy.

I agree that many win-win improvements in environmental performance to date have consisted of harvesting low-hanging fruit, but companies like Polaroid continue to find cost-effective environmental improvements. After the third year of its toxic-use reduction program, for example, Polaroid had exhausted the low-hanging fruit but went on to adapt best-in-class technologies to its existing processes and research new processes and chemistries. Polaroid has put in place systems to maintain continuous improvement in its environmental performance while funding only the projects that meet corporate ROI objectives.

The key to maintaining continuous environmental improvement is management, not technology. Cost-effective technologies will emerge so long as management systems identify, prioritize, and evaluate environmental opportunities.

Environmental performance measures must be tied to financial data to determine whether improvements contribute to shareholder value. On the cost side, TQM, which Walley and Whitehead dismiss much too readily, compares the costs of internal failure (resource waste and waste treatment and disposal) and external failure (remediation, fines, and liability) to the potential savings from prevention. Those costs must be allocated to specific products and processes in capital-budgeting and costing decisions. (In terms of traditional shareholder value, waste-treatment systems also tie up valuable capital compared with less capital-intensive prevention methods.) On the revenue side, TQM helps us understand customer requirements and the contribution of environmental performance to customer satisfaction and shareholder value.

More flexible government regulations create opportunities for environmental initiatives, but corporate management systems must take advantage of them. Traditionally, government regulations have focused on an imbalance between private and social costs as the basis for regulations. Recent initiatives, such as the Toxics Release

Inventory and the EPA's 33/50 Program, have sought to provide better information for corporate, customer, and stakeholder environmental decisions.

With greater flexibility, industry can craft more cost-effective initiatives. In an analysis of over 700 initiatives, DuPont has found that, on average, its internally generated environmental initiatives are three times as cost-effective as those that respond to government regulations.

If we want the world to beat a path to our door because we produce a better environmental mousetrap, we need to improve processes and products, not find better ways of disposing of waste. We do not need to throw money at every environmental opportunity that comes along, but we must develop and implement methods to measure environmental performance and assess the contribution it makes to shareholder value both by reducing costs and by enhancing revenues.

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Walley and Whitehead's arguments are timely. Enlightened companies have exhausted many of the relatively easy energy, waste, and resource-efficiency options. They are now into the harder, longer term investment commitments in which conventional economic and

environmental criteria are not necessarily in harmony. Companies—especially chemical industry giants like Dow, ICI, BP, and Shell—have been untypically transparent about the costs of staying in business: costs that, as Walley and Whitehead note, are difficult to justify on simple investment-appraisal bases. A steady diet of greenwash propaganda doesn't help companies.

We all want our economic prosperity—which we owe to the enormous success of business—to be compatible with environmental protection. But if we take a broader view and plot any measure of that prosperity against any measure of environmental degradation, we find that the two move, inexorably, in the same direction. After nearly a decade of fairly committed efforts on the part of business and economic communities to reduce their environmental impact, all we find is that the rate of acceleration of environmental degradation throughout the world is slowing down.

Given that we have no way of knowing whether or not the planetary ecology is truly in crisis, and that it is impossible for us to ascertain whether our present ways of doing business can be made compatible with environmental sensitivity, we as a business community have some hard thinking to do. And the sooner we abandon the virtually empty rhetoric of win-win situations the better—for business *and* the environment.

Throughout Europe, as in North America, companies are being driven by a mix of voluntary, semivoluntary, and legislative pressures, all of which attempt to go with the grain of the market. Voluntary environmental reporting is growing steadily. Voluntary supplier-chain audits are placing market pressures on companies to get up to speed on environmental management. The panoply of European Union initiatives—eco-labeling; the Eco-Management and Audit Scheme; initiatives on packaging, waste, and contaminated land—are creating a climate of development that more and more companies are finding difficult and expensive to meet.

Enlightened companies are experimenting with the new issues, but many others are unsure of how to react to all the changes. The legislative situation varies among the member states and remains confused over issues like liability for contaminated land. Bank and insurance markets are becoming increasingly complex too.

Underlying all this are the costs. While there is still confusion over what level of environmental response is being demanded of business, British Gas is spending heavily on its land cleanup, ICI continues to publicize its painful reinvestment program, British Petroleum continues with its massive emissions reduction, National Power struggles with trying to assess the necessary standards for its new generating plant, and British Airways continues to poke its environmental audit into every nook and cranny. These are expensive and painful experiences for leading, well-run companies. The

financial benefits are far from clear for any one of them, but they are the costs of staying in business—the costs of their license to operate in today's world.

On the other hand, there are still market advantages to be had. Norsk Hydro and BSO/Origin showed real benefits from having been the first companies into substantial voluntary environmental reporting. Ecover and, to a lesser extent, The Body Shop have gained market share from consistently leading in environmental initiatives. But those companies are probably the exception. And this is just the tip of the iceberg. Business has yet to begin to address the issue of sustainability.

“The case for business continuing as it is and being sustainable looks very thin. Whether that is a cost or a benefit, a threat or an opportunity, depends on your point of view.” —Rob Gray

As British Telecom and The Body Shop have both noted in recent environmental reports, when you cut through the rhetoric, it is doubtful whether our present ways of doing business can be compatible with sustainable development. The case for business continuing as it is and being sustainable looks very thin. Whether that

is a cost or a benefit, a threat or an opportunity, depends on your point of view. Whatever we decide, it won't be easy, and it won't be cheap. Walley and Whitehead are absolutely right on that!

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We agree with Walley and Whitehead—with one caveat. We believe that many companies, especially small and midsize ones, still have lots of opportunities for win-win solutions. The broader greening of industry will cause a lot of pain and cost a lot of money, but the authors' solution of focusing on environmental efficiency is too reductionist and far too easy.

Business faces many environmental challenges. Regulations will become more stringent and more encompassing, public expectations for environmental performance will rise dramatically, and environmental considerations will pervade the marketplace. Companies will be forced to deal with those pressures if they want to thrive.

Take Walley and Whitehead's example, the paper industry. In an article in the Winter 1993 issue of *Business Strategy and the Environment*, Vincent di Norcia, Barry Cotton, and John Dodge showed how environmental demands have changed dramatically the

competitive position of the Canadian paper industry. The former advantage of hinterland mill location has turned into a disadvantage because of lack of urban wastepaper supply. Users of paper, such as newspaper companies, are eager to use recycled newsprint, but Canadian producers have not kept pace with that development, viewing it as a threat instead of an opportunity. The paper industry faces a daunting range of environmental issues, including chlorine bleaching elimination, atmospheric pollution, and sustainable forest management. Thus a primary concern for this industry should be how to develop a strategy that integrates these pressures. Of course, efficiency is important, but to emphasize it too much misses the point.

Integrating environmental factors into a business strategy is not only a broad and deep process, but it will also involve big jumps and innovation. We see three crucial elements in this process. First, business needs to find ways to continue producing economically valuable goods and services while reducing their ecological impact dramatically. Accomplishing this goes beyond finding smarter and finer trade-offs between business and environmental concerns, as Walley and Whitehead suggest. It calls for developing new products and services.

Nick Robins offers several alternatives in “Getting Eco-Efficient,” a 1994 report for the Business Council for Sustainable Development. They include: miniaturization, drastic weight reduction, design for

disassembly, re-use, repairability, and aging with quality. These options challenge most of the conventional wisdom of product development. Also, instead of selling more solvents or cars, for example, businesses need to offer complete service, such as taking back products or leasing. Such a service approach will change most companies' identities.

Second, new standards, which go far beyond shareholder value, must be set for environmental efficiency. Progress (efficiency) needs to be measured on the basis of some kind of value added (money, services, human need) for each unit of ecological cost. Research is well under way to define new measures. As Robins points out, environmental efficiency cannot mean simply getting more from less, since this "less" may still exceed the ultimate limits of the earth's carrying capacity. Efficiency must encompass absolute as well as relative performance.

Third, companies must develop new relationships with employees, environmental groups, customers, the public at large, and governments. Such relationships will widen the scope of accountability and involvement of all parties in a learning process.

Noah Walley and Bradley Whitehead Respond

"The challenge is to figure out how fast and how far to go." It's a good sign that so many of the respondents recognize the hard ...



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