ENVIRONMENTAL LEADERSHIP

The Road to (Environmental) Hell Is Paved With Good Intentions

Doing what seems to be right for the environment can sometimes turn out to be wrong in the long term. How can you spot the warning signs?

As the proverb in the title suggests, well-intentioned efforts do not always guarantee desired outcomes. Two famous laws—one about unintended consequences and the other set down by Murphy—ensure that the landscape is littered with instances of good ideas gone awry.

This is as true in the environmental field as in any other area of endeavor. As we have learned in recent years, many efforts that seemed environmentally friendly when they were launched later turned out to be unmitigated disasters. In a few cases, they were eventually revealed not even to have been well intended in the first place.

This column reviews some notorious cases where "good intentions" have gone wrong. It also takes note of some current environmental practices about which skepticism is growing. My discussion explores common themes among these examples and highlights the underlying ethical issues. Finally, I offer some ideas (including a case study) suggesting what you can do to keep your organization from choosing practices that might ultimately become environmentally ruinous.

They Seemed Like Good Ideas at the Time

Asbestos, chlorofluorocarbons (CFCs), and polychlorinated biphenyls (PCBs) all share a common trait: Each was touted as a significantly safer alternative to older materials that were viewed as being more toxic and less efficient.

Other examples of "good ideas gone bad" abound. Adding lead compounds to gasoline and paint was once thought to produce a superior product. Now lead compounds are linked to mental retardation in children.

Many early efforts at controlling pollution seem naïve by today's standards. "Sanitary" landfills were introduced as a better way to manage solid waste. Only later did we realize that leachate from these landfills was contributing to groundwater pollution.

We have a long history of "solving" one problem by unwittingly creating another—often with even worse long-term consequences. For example, kudzu, an Asian vine, was introduced as a way of preventing erosion in earthworks in the south-

Richard MacLean

Published online in Wiley InterScience (www.interscience.wiley.com).
DOI: 10.1002/tqem.20249

eastern part of the United States. It now grows unchecked and is considered an invasive pest.

In the 1930s and 1940s, many cities thought streetcar tracks and overhead wires were "unsightly." They rushed to replace "old and inefficient" means of transport with fossil-fueled vehicles. (Some claim it was all a "Great Streetcar Conspiracy" by carmakers, oil companies, and tire manufacturers seeking a bigger market for their products.) Today, the same cities are spending millions to re-establish rail lines in an effort to minimize traffic congestion, reduce air pollution, and curb urban sprawl.

Scores of drugs meant to cure ills were later found to cause horrible harm. Thalidomide is the most famous (and gruesome) example. But even medicines as familiar as aspirin have been linked to serious health problems (for example, Reye's syndrome in children). The debate continues over the potential long-term effects of pharmaceuticals in the environment (PIE), while the list of drugs with dubious risk-to-benefit profiles expands each year. Similarly, the long-term risks and benefits of genetically modified (GM) foods and crop-based ethanol fuels continue to be hotly debated.

It is important to note that the timeline from introduction of a practice or substance to awareness of a resulting problem can play a major role in determining the extent of the damage that is caused.

Sometimes, the perceptions about an issue actually come full circle, or nearly so. Consider dichlorodiphenyltrichloroethane, better known as DDT: When it was introduced as a pesticide in the 1940s, DDT was hailed as a lifesaver for its ability to eradicate mosquitoes and lice that carried deadly illnesses like malaria and typhus. But by the mid-1960s, its reputation had fallen to an all-time low. DDT came to be seen as a toxin that decimated bird populations and potentially contributed to cancer. As the lead villain in Rachel Carson's *Silent Spring*, it can be said to have inspired the modern environmental movement. Now, decades after its use was banned, we have developed yet another perspective on DDT. Many see its loss as a public health disaster for areas of the world where insect-borne illness is rampant. They argue that the problems associated with DDT were attributable more to overuse than to the characteristics of the pesticide itself.

The Common Thread

There is a common thread in the examples cited above: The benefits of the practice or substance at issue were very clear, immediate, and tangible, while the problems associated with it seemed (at least initially) to be remote or ill defined.

In this context, it is important to note that the timeline from introduction of a practice or substance to awareness of a resulting problem can play a major role in determining the extent of the damage that is caused. For example, warnings about the effects of asbestos were voiced as early as the 1800s, but mesothelioma takes decades to develop. As a result, the ill effects of asbestos were not fully recognized for many years, and the substance was not banned for most applications in the United States until 1989.

By contrast, the horrendous effects associated with thalidomide actually created a perverse benefit. The damage caused was so horrible that it was noticed immediately. If thalidomide had merely led to Johnny being slow at school at the age of 13, the drug might still be in use today.

Major Issues Follow a Predictable Path

Environmental, health, and safety problems are very often preceded by early-warning signals (as illustrated by the earlier asbestos example). Indeed, major issues tend to play out over a predictable path.[1]

In the incipient stage, "fringe" individuals and groups spot problems and start trying to

publicize them. More formalized scientific and academic research typically follows. Then, as the issues start to take shape more clearly, the larger and better-established public interest groups join in to express their concern. Next, some event associated with the problem triggers a "crisis" that generates widespread public and media attention. Finally, as public pressure grows, politicians, regulatory agencies, and industry acknowledge the problem and work toward public policies that resolve it.

The level of attention and the resources devoted to the issue increase exponentially as each stage evolves. In some cases, such as the PCB and DDT examples cited earlier, public frenzy can reach a point at which reason is lost and the outcome is driven more by politics than by science and rational discourse.

Clearly, in an ideal world, if issues could be resolved in their earliest, incipient stages, the best outcomes could be realized for all the parties involved. In this respect, being able to identify emerging problems is among the most valuable functions that an environment, health, and safety professional can provide.

Conflicting Interests and Slow Response Times

If early warning signs are almost always present, why is it so difficult to avert disasters?

Time is a major factor. If problems remain hidden long enough, entire industries can be built around the use of an environmentally damaging material. The original benefit associated with the material is supplemented, if not superseded, by the benefits associated with an economically viable industry.

It is easy to rationalize away growing evidence of damage if acknowledging the problem would mean curtailing or shutting down an industry, leading to displacement of workers and losses to shareholders. Just think of the tobacco industry. Stories about the industry's lobbying efforts and its "research" minimizing the dangers of smoking are legendary.

By contrast, industry can address issues quickly if solving the problem means enhanced profits. Thus, for example, the ban on CFCs occurred relatively swiftly after DuPont recognized that these compounds could be replaced by other, more profitable substances that the company itself could develop.[2]

Generating the Next Environmental Disaster?

Despite what the headlines would lead us to believe, there are relatively few truly evil people who knowingly and calculatingly game the system to enrich themselves. Organizations generally act in good faith when they hire lobbyists, lawyers, technical and communication experts, research organizations, and spokespersons to get their messages across to the media, the public, government agencies, and politicians. Companies can be quite proficient in building defensive shields to protect their vested interests—all in the name of good intentions—based on their particular interpretation of the moral and ethical landscape.

Companies can be quite proficient in building defensive shields to protect their vested interests—all in the name of good intentions—based on their particular interpretation of the moral and ethical landscape.

I am not a big believer in conspiracy theories. In most cases, what appears to be a "conspiracy" turns out, on closer examination, to be a series of blunders.

That said, however, we need to step back and examine the broader implications of the way in which public health and the environment are being managed today. Naturally, those in charge operate under the banner of fairness, legal propriety, and good intentions. But could we be facing new forms of environmental and public health crises that few of us even recognize currently?

An Avalanche of Analysis

In the distant past, a lack of scientific evidence and widespread ignorance about ecological and human-health dynamics may have been valid reasons to introduce or continue questionable practices. But what about today? Ironically, our current ability to explore (seemingly without limit) these technical dimensions has allowed dueling experts to argue over every nuance.

Consider for a moment the relentless clamor surrounding today's headline-grabbing environmental issues—genetically modified foods, bio- and nanotechnologies, pesticides, population control, affluence, and (the most contested issue of all) climate change. It is a landscape of endless debate with little resolution, in spite of modern science. Rational discourse is often replaced with ideology-driven tirades. In this environment, research funding and government programs may target the issues that are getting the most current press coverage or those that appear to be the most "politically correct," regardless of their real importance.

Will selling two times as many new widgets that are 25 percent more eco-friendly than the earlier model lead to sustainability? I don't think so.

We have entered a state that some call "analysis paralysis," while the public is left baffled and overwhelmed. Given this background, how can ordinary citizens do much more than focus their consumption on products advertised as "eco-friendly"?

Meanwhile, many serious and pressing issues are all but ignored in the popular press. The milestone awakening for me was the media's lack of interest in conveying the results of the United Nations' Millennium Ecosystem Assessment Reports, beginning with *Ecosystems and Human Well-being: Synthesis*[3] in 2005.

An Illusion of Environmental Progress?

It is not just specific environmental issues that get distorted and handled with a lack of perspective. The same is true for broad concepts and trends, such as sustainability, efficiency, "voluntary action," and green marketing. For more than a decade, industry and government agencies have relentlessly promoted these approaches as the answer to protecting future generations from environmental disaster. But can they achieve the results claimed for them?

Sure, such initiatives will help. But can these efforts—at least as currently practiced and marketed to the public—do much more than slow the growth rate of unsustainability?

Could the focus on these concepts and initiatives be providing an illusion that action is taking place? Are they being used as a rationalization to continue consumption at a rate that is, in fact, unsustainable? Will selling two times as many new widgets that are 25 percent more eco-friendly than the earlier model lead to sustainability? I don't think so.

Questioning Green Gestures

Others are starting to notice the disconnect. The *Wall Street Journal* reports, "[Activists] fret that a flood of well-meaning but inadequate gestures gives people a false sense of progress, lulling them into complacency just when the world needs more environmental action and less talk—not the other way around."[4]

There have been scores of major environmental efforts in the past, and new efforts are being launched every day—all of them done with the best of intentions. But one wonders whether these efforts will really protect the environment and future generations. Might they instead be guaranteeing failure?

For example, Wal-Mart's recently announced Sustainability Index program will provide more information to consumers about suppliers and

the products they make. Clearly, some consumer-information schemes (such as food labeling) have unquestionably been successful in helping consumers make better choices. But as environmental writer Joel Makower points out, "Like so many things related to both Wal-Mart and sustainability, there is both more and less going on here than meets the eye."[5]

Obviously, Wal-Mart's program is a step in the right direction, just as nongovernmental organization-industry partnerships, voluntary initiatives, and university "endorsements" of sustainability projects can help support positive action (and grab headlines). But are these "steps in the right direction" sufficient to keep pace with global environmental degradation? Or do they provide fodder for rationalization and an advertising backdrop for consumption without guilt?

Dealing With Emerging Ethical Dilemmas

There are no easy answers to these questions, just as there were no early solutions to the long-term, harmful effects from the practices and substances discussed in the previously cited examples. The new generation of practices launched under the banner of "sustainability" presents ethical dilemmas that few recognize and that almost no one is addressing.

The tools to do so, however, have been around since the days of the ancient Greek philosophers. I discussed these issues in a series of e-mail exchanges with David Brown, Sc.D., adjunct professor of applied ethics at Fairfield University, who notes that ethical dilemmas typically arise in situations where "obligations are in serious conflict."

Professor Brown states that ethics is about "the fair resolution of dilemmas" and notes that an ethical resolution framework must include three central principles:

- beneficence ("do well, do not do harm"),
- respecting the humanity of other people ("do not lie, mislead, hide information"), and
- justice ("a responsibility to protect the interests of society").

A Case Study in Early Intervention

In the early 1980s, I was working in the plastics industry as the head of health, safety, and environment for a major business division of a parent company. Researchers at the division had just discovered a thermosetting catalyst that was unlike any previously available. Epoxy-type resins begin curing at the moment they are mixed with standard catalysts. This new catalyst remained inactive until a very specific and desirable temperature was reached.

This catalyst had enormous potential, and the marketing department immediately began distributing samples of it in order to encourage commercial trials. But there were also indications of problems with the substance. Both my department and the division's medical department recognized that the catalyst contained small amounts of a material that potentially could be toxic under certain circumstances.

Jointly, we formed an internal task force consisting of toxicology, environmental, industrial hygiene, and medical professionals. Our work was supported by an outside toxicology lab and a prestigious occupational medicine institute. In relatively short order, we discovered that the material was not just toxic (as suspected), but in fact so biologically active that it was attracting interest from external physicians as a possible pharmaceutical because of its radical effect on the circulatory system.

Executive management at our division could have attempted to brush off the preliminary test results as insufficient and inadequate to justify withdrawal of the material from full-scale commercialization. They could have rationalized away the risk and limited funding for what eventually became very expensive and sophisticated testing. Instead, they fully supported our efforts and allowed the toxicological testing and evaluation to proceed unhindered and in an unbiased manner.

Ultimately, the division decided to withdraw the catalyst from all future commercial trials. As a result, no one was ever seriously injured by the material.

If the toxicity of the catalyst had been fully understood in advance, the material might have been introduced successfully into a highly controlled, specialized niche market where its unique properties could have been utilized fully and safely. But the mainstream market was not equipped to handle the material. The division considered it too likely that customers would use the substance as they did other, relatively safe commercial catalysts, without proper safeguards.

In his classes, Professor Brown offers students the acronym "DISORDER" to describe the steps required for an ethical approach to analyzing problems; the letters stand for the following (paraphrasing Brown's language somewhat):

Dilemma: Define what is at issue.
Information: Identify what information is needed.
Stakeholders: Identify them all.
Options: Identify what they are.
Rights: Identify what they are and who has them.
Decision: Make a decision and then defend it.
Evaluation: Assess the new situation based on the core principles.
Review: Repeat the process via review.

Early Detection of Problem Issues

Although the approach outlined by Professor Brown may seem far removed from typical business decision making, it actually offers a valuable framework for making critical choices—especially in cases where organizations need a method for identifying and addressing issues that seem to offer immediate benefits but may lead to environmental disaster in the long run.

As the many examples of "good ideas gone bad" make clear, businesses need to develop mechanisms for early detection of issues that may create long-term environmental, health, and safety consequences.

As the many examples of "good ideas gone bad" make clear, businesses need to develop mechanisms for early detection of issues that may create long-term environmental, health, and safety consequences. Unfortunately, however, many business managers today have become complacent about environmental issues, relying on regulatory compliance to protect them from disaster.

In large part, this attitude of complacency has taken hold because environmental professionals have managed to keep issues relatively well controlled for the past several decades. So perhaps we should see it as a compliment to their ability that management attention has shifted to "sexier" issues such as green marketing.

But management complacency can become a dangerous trap for companies. So how can your company find a way to identify the most urgent potential issues and focus the appropriate level of attention and resources on them before they get out of hand?

The case study presented in the sidebar illustrates how potentially serious problems can be avoided if proper steps are taken at the outset. Other ideas are discussed briefly in the sections that follow.

Building Strategic Planning Systems

Clearly, companies need to build appropriate strategic planning systems that can examine long-term issues and opportunities. The most critical first step is to establish a mechanism for discussing these emerging strategic issues and their implications with top business executives. All too often, environmental meetings with top executives (if they take place at all) are limited to discussing status reports on current projects, problems, and performance metrics.

Meetings with top management need to be much more robust. I have explored the mechanical dimensions of building robust planning strategies elsewhere, so I will not go into detail about them here. Readers who want to learn more may find it useful to consult my previous writing on this issue.[6]

Creating Appropriate Decision-Making Mechanisms

Companies need to ensure that they have appropriate decision-making mechanisms in place that allow them to consider all relevant information, especially when making business decisions on issues that may have long-term environmental consequences.

But companies should not use information analysis as an excuse for obfuscation. Companies can easily confuse and conceal issues in a flood of conflicting research and expert advice. In effect, they can "shop" the experts until they get the answer they want—all under the banner of thoroughness and good intentions.

Professor Brown notes that companies can encounter two threats when trying to make decisions and resolve conflicts: "First is the flatterer, the 'expert' who tells you what he thinks you want to know. . . . The second threat is the relativist, the person who changes his values based on the circumstance today. The relativist annihilates the ability of the group to reason effectively."

Brown offers some additional observations on the process of gathering information and making decisions. He notes that ethical analysis should be "complete and fair and leave no gaps. You do not have to know everything, but you are obligated to know when you do not know."

In making decisions, compromises are inevitable. No decision-making process, however fair, can ensure that all stakeholders get everything they want. Observes Brown, "There will be losers if there was really a conflict in the first place." But the important point, he says, is that both winners and losers "must know that the process is fair." He adds, "Ethics is about making informed decisions through quality reasoning, not about being paralyzed by uncertainty."

Concluding Thoughts

Now more than ever, businesses find themselves confronting environmental, health, and safety issues that raise ethical dilemmas. Often, the "right" decision is less than crystal clear. When such issues arise, it may be time for top managers and environmental professionals to have a frank discussion about the core principles and values of the business.

Many company managers may be tempted to brush off such discussions as somehow irrelevant to business decisions. In truth, however, considering the ethical dimension can offer companies a powerful "disaster avoidance" mechanism. Because adopting an ethical framework requires decision makers to broaden the range of potential stakeholders and consider a wider array of options, it can help ensure that companies consider the ultimate consequences of their decisions, rather than simply focusing on the short-term benefits.

The case study discussed in the sidebar offers a shining example of business executives being totally supportive of an ethical decision, even when it meant shutting down a potentially profitable business line that would have created new jobs. How would your management decision-making process fare under similar circumstances?

Notes

1. See Anderson, D. D. (1997). Key concepts in anticipatory issues management. Corporate Environmental Strategy, 5(1), 6–17.

2. Maxwell, J., & Briscoe, F. (1997). There's money in the air: The CFC ban and DuPont's regulatory strategy. Business Strategy and the Environment, 6(5), 276–286.

3. Available online at http://www.millenniumassessment.org/en/index.aspx.

4. Ball, J. (2008, April 22). Burning question: Is Earth Day bad for the planet? Some activists fear bold action is lost amid the annual hype. Wall Street Journal, p. A19.

5. Makower, J. (2009, July 16). Walmart's sustainability index: The hype and the reality. Two Steps Forward blog, http://www.makower.com.

6. See the author's extensive writings on management systems and strategic planning on his Web site at http://www.competitive-e.com/publications/index.html.

Richard MacLean is president of Competitive Environment, Inc., a management consulting firm established in 1995 in Scottsdale, Arizona; a principal at Independent Perspectives, a virtual consulting network supporting business management; and executive director of the Center for Environmental Innovation (CEI), a university-based nonprofit research organization. He can be reached at maclean@competitive-e.com. For more information, visit his Web site at http://www.Competitive-E.com.