An interview with William Reilly

From 1989 to 1993, William Reilly was the administrator of the U.S. Environmental Protection Agency—the federal regulatory agency with 18,000 employees and a $7 billion budget, charged with improving and protecting public health and the environment. During his time at EPA, Reilly consistently championed integration of the nation's environmental and economic agendas and sought to strengthen the role of science at the EPA. Reilly played a pivotal role in crafting and securing passage of a new Clean Air bill, which creates an innovative, market-oriented emissions trading system to cut sulfur dioxide pollution in half. He gave impetus to the president's policy of "no net loss" of wetlands, and during his tenure EPA vetoed three water resource projects for adverse environmental impacts. Reilly made pollution prevention a priority and under his direction Superfund sites are now being cleared up at the rate of one a week. Reilly also played a leading part in asserting environmental priorities in U.S. foreign policy, including those in the North American Free Trade Agreement.

Sandra Batie interviewed Reilly for *CHOICES* in mid April, shortly after the new administration had assumed leadership in Washington and Reilly had taken his new position as Senior Fellow at the World Wildlife Fund. This is the first of a two-part series from the Reilly interview: this Quarter's segment focuses on environmental and health risk, and especially how risk is assessed and managed.

by Sandra S. Batie

Batie: As you are aware, the assessment and management of risk is an exceptionally important issue in environmental policy. The Environmental Protection Agency has spent considerable effort to achieve broad public acceptance of the concept of acceptable risk. Do you think EPA has been successful?

Reilly: Four or five years ago the concept of risk assessment and risk management were largely unaccepted by the environmental community. They were seen as a ploy on the part of business—much of the same way that assimilative capacity had been seen. That is, some environmentalists saw both the assimilative capacity concept and the risk assessment method as a way to legitimize pollution and make "harm" somehow "relative" and "acceptable." Although there are still some environmentalists who remain suspicious of risk management, many now accept the concept as a legitimate one.

Batie: What is your response to those who remain suspicious of risk management?

Reilly: If you actually sit in the administrator's chair and regulate the environment, you are immediately taken by the fact that the universe of things people are concerned about is unlimited. The resources you have, even to deal with the priority problems, are relatively small, and you need some principle of organization. You need some principle of exclusion—what it is you will

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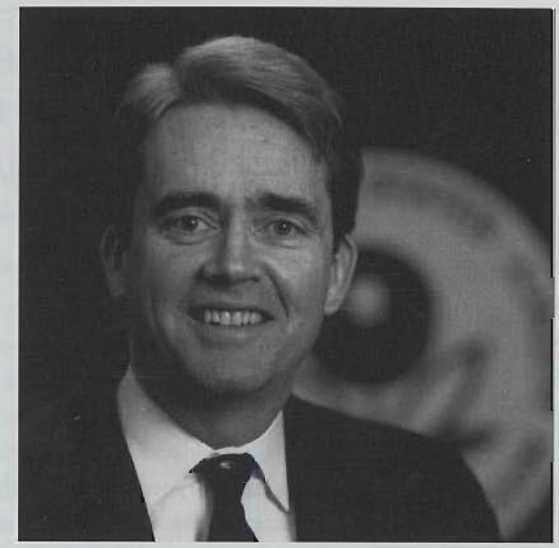

not do. No one wants to make these choices explicit, but in fact, such choices are made every day. The country does choose acceptable risks—de facto, when we, for example, decide not to put on more auto safety equipment, to not put guard rails up in more places, or to not lower the speed limit to 25 mph from 55 mph. All those choices have consequences as to lost lives, time, and money.

Batie: Laws and agencies use different risk ranking criteria (e.g., zero risk, minimal risk, balanced risk, etc). How important is it to achieve standardization of risk ranking criteria? What alternatives are available to bring about standardization?

Reilly: As EPA Administrator, I was concerned that our approaches to risk assessment in various laws do vary a great deal. We use the maximum exposed individual. We use the health of the broader population. In some cases, we are not even allowed to use risk assessment. The EPA has been criticized for being excessively cautious where hazardous waste risks are concerned, and for using exposure assumptions that are wholly unrealistic about the amount of dirt that people would eat over a 70-year lifetime. These assumptions then warranted a high hazard ranking evaluation and a Superfund classification. I understand such criticisms. It's very difficult to justify the different approaches to risk, although some of them are imbedded in the statutes. We had a Risk Advisory Committee under Deputy Administrator Hank Habicht at EPA to standardize risk assessments. I spent virtually the whole time I was Administrator on this issue and did, in fact, issue guidance unifying risk assessment agency-wide.

In addition to working with the Risk Advisory Committee, I asked the scientific community, independently of EPA, to tell us what were the significant risks, threats, to health and the environment, and secondly, to tell us to what extent those risks comported with the priorities of the agency in terms of budget and staffing levels. The Science Advisory Board, under Dr. Ray Loehr of the University of Texas, answered those questions in a report, *Reducing Risk*, that I used throughout my tenure as administrator. The report said that the agency had overestimated risks from oil spills and hazardous wastes, and had deployed a substantial amount of the agency's budget to these issues. They also found that EPA had underestimated such concerns as indoor air pollution, climate change, ozone depletion, habitat alterations, species loss, and pesticide application risks. The report also indicated that the priorities for ecological systems were too low in the agency and ought to be raised. I took the report very seriously. For example, EPA raised the budget for specific ecological areas like wetlands, estuaries, and the Great Lakes from $40 million to over $700 million.

Batie: Do you feel that these improvements in risk assessment and management methods focus agency attention on the truly important risks to society?

Reilly: If you look at what has happened since that science advisory board report, you see that there was, first of all, a tremendous effort undertaken by EPA to identify and prioritize risks. Our budget decisions began to reflect these priorities. Second, we did develop a more uniform approach to risk management and assessment. Third, we influ-

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enced states to begin priority setting exercises of their own. Fourth, we increased public understanding of risks. Television reporting helped. I saw, on television programs, some very graphic descriptions of the differences in the risks that confront people who live in the so-called "cancer alley," Baton Rouge-New Orleans, Louisiana, versus those that confront people living in rural California. That's exactly the type of reporting we need to improve public understanding of risk.

The print media also picked-up on these concepts, as seen by the recent front page stories in the *New York Times*—a series on risk by Keith Schneider. During the late 1970s and early 1980s, the agency—the country really—probably overreacted to some risks, like dioxin. Remember all the people evacuated from Times Beach, Missouri, on the assumption that the evacuation was urgently necessary to protect their health and safety? This decision was advised by someone—a distinguished scientist from the Centers for Disease Control—who has since repudiated it. I decided to review dioxin, a decision that was controversial within the agency and outside. Yet a major review of dioxin was exactly what the agency had to do if we were to assure EPA focuses on the truly important risks.

The review of dioxin, which I consider a model in its thoroughness and involvement of outside scientists, revealed that some human health effects have probably been overstated, while new concerns arose related to developmental effects and ecological effects.

Batie: What is the role of science in these types of decisions?

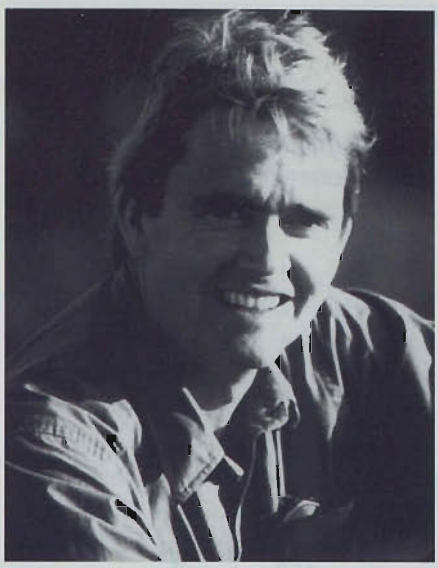
Reilly: All we have is science on which to base most regulatory decisions, and scientific information is often incomplete, untimely, or politically inconvenient. But if you develop the habit of attending to the science and responding to it when you have scientific evidence, you will establish a more enduring foundation of integrity and public respect, support, and understanding. Let me give an example. The EBDC decision is one that confronted us directly with this kind of problem. EBDC is a chemical applied to fruit and vegetables. As the fruit or vegetables come from the field, they have residues in excess of what EPA will tolerate based upon conventional risk assessment methods. I, acting on that information, which was the only information that EPA had in a reliable form, banned in excess of 40 food uses of EBDC in 1990.

However, we suspected that the time between bringing the food out of the field and getting it to the consumer's table would result in a reduction of the risk by a very large factor. We did not have market basket surveys to demonstrate this reduction, however. Later, as a result of the largest survey and analysis ever done by industry, we received this evidence. It was convincing to me. EPA knew that EBDC was, at very high doses, a carcinogen, but we also knew that by the time you get it, even in the supermarket, it's lost a lot of its potency. By the time the consumer gets the food home, the risk is negligible.

On the basis of new evidence, I decided to reverse the earlier cancellation order and allow EBDC for most food uses—the first time such a decision was ever made. EPA braced for a hurricane of public disapproval. I was fascinated by the outcome. We did not have the kind of rancorous press conference we expected, nor did we get the negative reaction from the public that we had feared. We were seen to have been very cautious when the data had warranted, but then were seen as responsive to new scientific findings when new, better data became available. The reaction to the EBDC decision persuaded me that people understood what we were doing.

Batie: Your example of EBDC raises the issue of the validity and policy use of the Delaney Clause, which prohibits the use of a food additive that has been shown to be a carcinogen in humans or animals. How does your example and discussion of the role of science relate to the Delaney Clause?

Reilly: As the National Academy of Science has said, the Delaney Clause is bad science. I thought the Ninth Circuit Court opinion overturning EPA's application of the Delaney Clause implicitly acknowledged that our approach was good science and good policy; it just wasn't good law. We need to get uniformity in the treatment of natural and processed foods so we do not have this anomalous application of two laws with two different risk assessments as we do now. Also, we need to embrace the concept of negligible risk so as not to skew the whole evaluation system in a way that may lead to ignoring non-cancer risks, or to making some nutritious foods expensive or unavailable for want of a pesticide or fungicide.



Batie: Do you foresee better coordination between types of environmental legislation?

Reilly: Eventually, it's got to happen. One of the advantages of prioritizing risk and then of making uniform assumptions on risk is it shows that some statutes make a lot less sense than others. The main obstacle to integrating our approach to the environment, frankly, has been Congressional committees. The statutes come from different committees, with different histories and orientations. A uniform statute is long overdue and may some day be politically feasible with a more mature environmental experience in the United States.

Batie: Achieving an acceptable balance between the benefits of certain products and acceptable risk suggests a role for economics. Would you comment?

Reilly: The role of economic analysis is often misunderstood in environmental policy making. There is no way, practically, to exclude considerations of economics when making environmental decisions. It is fashionable sometimes to say "this is a matter of health protection," and "we will not look at cost." Well, the truth is, that we look at the costs for everything we do; if the statute does not provide for economics to be factored in, there will develop some de facto method to do that. This is because we do not have unlimited amounts of money. In fact, the history of EPA is one of a steady accumulation of new responsibilities—typically from each Congress—without commensurate money to support these activities. So, you have to make tradeoffs. Pretending that economics is not relevant, as some of the statutes do, is counter-productive.

The balancing requirement that you go through within the pesticide law is, in my view, a good approach. It is a law that explicitly says you are to weigh the benefits of reducing the threat to health from a particular chemical against the economic advantages that particular chemical now provides in farmer income or in the nutritional value of a product. That type of balancing is a reasonable way to proceed.

Balancing is something that has to be explained to the public and to the press constantly; at EPA, I tried to communicate in a much more explicit way than EPA had ever operated. Specifically, EPA would state that we anticipate that a chemical ban will raise the price of a product by "x" percent, and we think that the impact on region "y" will be great, and that "z" deaths or cases of illness will be averted. Such candor exposes EPA to considerable criticism because your assumptions and conclusions are always tentative and imprecise. But candor permits an informed debate, something reporters and the public increasingly understand and respond to. ◙