

**by Debbie Raphael**

*Editor's Note: The following two talks were given to the 25th National Pesticide Forum, Changing Course in a Changing Climate: Solutions for health and the environment, June 1-3, 2007 in Chicago, Illinois. The first presentation focuses on the experience in San Francisco, California implementing the precautionary principle, and the second portrays the evolution of parent activism to protect children in the Los Angeles Unified School District..*

### **Acknowledging an activist and leader**

**T**he first thing I want to do is acknowledge someone in the audience. Because here I am, talking about the *precautionary principle*, and the first time I heard those two words together was when I was working for the city of Santa Monica. There, I met this incredible woman with energy like nobody's business: Robina Suwol, founder and executive director of California Safe Schools and president of the Beyond Pesticides board of directors. She got me to join a group of angry but constructive parents who wanted to change the Los Angeles Unified School District. Now, that is a big measure. I was sitting around the table with her and some other people and we were trying to figure out how to deal with this pesticide issue in this incredibly massive school district, and she brought to our attention this thing called the *precautionary principle*. I had never heard of it, and as I read it I thought, "If these guys in the administration of the school district read it carefully, there's no way they're going to include this in their principle."

So they didn't read it; they just said, "Alright, whatever Robina and her friends want, at this point we just have to say 'yes' because they've got us painted into a corner." So the board of education voted to include the precautionary principle in their integrated pest management (IPM) policy. That was in 1998.

That was my very first introduction to the precautionary principle. I didn't know a lot about what it meant at that point, but I could tell that it was a fundamental shift. I credit Robina with introducing me to a concept that has turned into a real vision for me, and a real paradigm that helps me understand the work that I'm doing. So what I want to do today is introduce you to how we define the precautionary principle and why I believe it's such a robust concept, and then tell you how it fits incredibly well with the work you do in integrated pest management of looking for alternatives to pesticides.

### **A vision or a fight**

The fit is so phenomenal that I find it really helps us move even farther than we think we can. I look for inspiration and, as a government official, I have to look for inspiration in unusual places. I was at a conference in Minnesota where a logger from Libby, Montana, Bruce Vincent, gave the most amazing talk I've heard. He said a couple of things that I want to share with you today. The first thing he said is: people will follow those who lead. If you don't have a vision all you have is the fight. When I think about integrated pest management, I really believe that IPM was born of a fight --a fight between the industries that make the pesticides and people on the ground who have to use them, and the citizen groups who oppose their use. So IPM really came out of a fight,

and I believe that IPM offers a solution, but it's not necessarily a vision.

## Uncertainty and paralysis

When I think about the vision that my children have now, about their future, and we're around the breakfast table talking and using words like "climate refugee" and peak oil" and "body burden" and "asthma" and "breast cancer," that's a pretty gloomy vision. What we really need is a vision that's going to carry us forward, not just a solution. We could sink into that place of being overwhelmed, but hopefully I'm going to offer you something today what I believe is a vision for moving us forward.

The challenge is that science really helps us understand all of those problems, but we know that proof of cause and effect can be incredibly elusive and can take way too much time. We cannot afford for this uncertainty to be an excuse for decision makers to put off making decisions: a paralysis of leadership. That's where we are now, right? This uncertainty means we don't make decisions. We wait for more information. So I want to read you a couple of really inspirational pieces of things that governments say.

## Examples of precautionary policies

"It is legitimate that decisions be guided by society's chosen level of protection against risk." That's the Canadian government, recently, in its chemicals policy. So they're acknowledging that we can understand risk, but the people have a right to decide how much risk is acceptable.

Here's another one: "A scientifically based suspicion that a chemical may cause damage is enough for taking regulatory actions." (You

can tell that's not the U.S.) "The uncertainty that might arise from the hazard of using such a chemical shall not be carried by the general public, but shall fall upon those who want to market the product." It's Sweden, my heroes. There are days when I wake up and just wish I was in Sweden. It is amazing to me that they can say that.

I'm going to read you a little longer one now –this blows me away, too:

"The nation, recognizing the profound impact of man's activity on the interrelations of all components of the natural environment, particularly the profound influence of population growth, high density urbanization, industrial expansion, resource exploitation and new and expanding technological advances, and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of humankind, declares that it is the continuing policy of this nation to use all practical means and measures to create and maintain conditions under which people and nature can exist in productive harmony for present and future generations. In order to carry out this policy, it is the continuing responsibility of this nation to use all practical means to the end that the nation may fulfill the responsibilities of each generation as trustee of the environment for succeeding generations."

Do you know who said that? That was the 1969 *National Environmental Policy Act* (NEPA) that the U.S. Congress passed.

When I read NEPA, I just went, "Holy cow, where have we gone? We got it in 1969. What are we doing now?" So basically, governments are really looking – governments like San Francisco and state governments across this country –for a better decision making process. We need a process that is not stymied by uncertainty. We need a process that allows society to weigh in on the appropriate level of protection. We need a way to make decisions that will counteract the current vision of hopelessness.

In the 1970s, the German government was faced with a dilemma. They saw that in the Black Forest the trees were dying. They couldn't quite prove it, but they had a really good inkling that it was coal-fired power plants that were causing acid rain, which was killing the trees. But, they couldn't prove cause and effect. So of course the power industry was saying, "More study, more study." Instead, the German government did something: "*Vorsorgeprinzip, vorsorge.*" *Vorsorge*, if you really translate it, means "for caring." Like all translations, sometimes it's hard to go between one language and the other. But it means "for caring." Foresight is the word we use: the *foresight principle*. Unfortunately, in my mind, what happened at Wingspread, Wisconsin, when a lot of visionaries came together to look at this, they called it the *precautionary principle*. So they translated "vesorga" to precaution. I, frankly, am not sure that it is the best word, but it's the word we have now. I like "for caring," I like "foresight;" I think that is more meaningful.



Debbie Raphael addresses the 25th National Pesticide Forum in Chicago.

## Is it legal?

What the German government said in invoking this *foresight principle* is: we owe it to our citizens to take action even though we cannot prove cause and effect. And that's the crux of the thinking behind the *precautionary principle*. When I have tried to define this –and I've been up on wonderful panels with the oil industry and the American Chemistry Council, all my good friends, talking about the *precautionary principle* – I like to bring it down into this one sound bite. This is how I define the thinking of precaution in terms of decision making: *it's a matter of the questions you ask*. When you're thinking about whether you should do something, or buy something, or use something, *it's no longer sufficient to ask if it's legal*, because we know in the U.S. pretty much everything is legal. It's perfectly legal to put the weedkiller Roundup on a playground where children are going to play and it's perfectly legal to carry a handgun. We know that that's no longer a sufficient question that we should be asking.

## Is it safe?

It's no longer sufficient to ask "Is it safe?" either, because there's a real problem when you ask "is it safe?" When you ask "is it safe?" it depends who answers the question. Monsanto can come with their two feet thick of science saying Roundup is perfectly safe, and Caroline Cox [Center for Environmental Health, formerly of the Northwest Coalition for Alternatives to Pesticides] can come with her two feet thick of science saying there's no way this is safe. What does a decision maker like me do when trying to make a policy and people are coming with all this science? I don't want to ignore the science, but how do I make a decision? So the answer, traditionally, has been: more study. Don't make a decision, study the problem more.

## Is it necessary?

Instead, the *precautionary principle* says: *the question we need to ask is not, "Is it legal?" not, "Is it safe?" but, "Is it necessary?"* Do we have to use that product? Is there a safer alternative? Because that's actually a question that can be answered right then and there. That's a question that leads to action, whereas, "Is it safe?" doesn't lead to anything. So the *precautionary principle*, I believe, places the idea of IPM into a larger context, and this is where the vision comes in. It makes it into a context that is explicit about an obligation to minimize harm. That we're going to look at alternatives, and we have an obligation to choose the alternative that minimizes harm. It also becomes explicit on public involvement, and I'm going to talk about that as we go. So the big question is, then, how do you determine if something is necessary?

When I think about books and visionaries, the book I'd like to recommend is one by a woman named Mary O'Brien, Ph.D., who wrote the book *Making Better Environmental Decisions: An Alternative to Risk Assessment*. She proposes that what we need to do is not knock out risk assessment, but use it as an alternatives assessment. So what we need to do is look at risk, but in the context of an alternatives assessment. So that the question we're asking our risk assessors to answer now is not how much harm is allowable. That's what typical risk-assessment people do, they figure out how much harm is allowable: one death in a hundred thousand, one death in a million, and then they say, "Does this practice fall within that realm of allowable harm? And if so, go for it."

Instead of asking how much harm is allowable, we ask *how little harm is possible*. What are the alternatives? Look at the risks, the benefits, the costs of all of them. Look at the science of all the alternatives, and choose the alternative that minimizes harm.

Who gets to determine what's necessary? We know the how: that's the alternatives assessment. This is the scariest part to industry: they're not that uncomfortable with alternatives as a concept, but it's the question of *who gets to decide* that makes them very uncomfortable. In a precautionary approach, it's incredibly democratic. In a precautionary approach, you bring in the affected parties early on, at the beginning of the decision making process, to decide what alternatives will be decided. Traditionally, this is what happens in government: let's say, we need to build a new sewage-treatment plant. What we do is hire a consultant, and the consultant spends thousands of dollars putting a plan together, and then we give that plan out to the public, and you have thirty days to comment on it. Then we don't really want to hear your comments because we have so much invested in that plan. That's traditional public participation.

What precautionary participation means is that you recognize that there's a problem, you bring in affected parties, and you decide what the alternatives are going to be that the government is going to analyze, and then you look at those alternatives. And, you know what? The one that minimizes harm is 10% more expensive. But if the elected officials say, "This is how we want to spend our money, this is important to us," then that's the alternative that gets chosen. So the status quo, which is very comfortable to industry, really gets thrown out the door because all the alternatives are on the table early on. In order for governments to do this, though (and it's scary for them, too), they cannot fear the dissenters. In fact, they have to invite the dissenters in very early on to help look at the alternatives. I would suggest that we as government need not fear them –you guys– but to allow you in early so you can sharpen the debate.

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## Applying precaution in San Francisco

I want to give some specific examples now about San Francisco and pesticides. Basically, it was the dissenters that brought IPM to San Francisco. Our gardeners were perfectly happy to be doing things the way they always have. But a guy named Gregg Small, who's now with the Washington Toxics Coalition, was a young person in Green Corps and was spending a summer in San Francisco, when he decided to look at the storage closets to determine what was being used in our parks. He discovered some pretty awful stuff and got his findings in the *San Francisco Chronicle*. The headline read: "Parks Are for People, Not Pesticides." In San Francisco, we have a pretty radical elected body, and they said, "We're using pesticides; we need to change this!" So they passed a law that said, "We're going to ban all pesticides by the year 2000." This was in 1996. And everybody cheered, except their cheers weren't very long-lasting, because then they realized that oops, did you know that disinfectants are pesticides and we run hospitals, and did you know that chlorine is a disinfectant and we have public swimming pools, and we have very happy rats in Fisherman's Wharf and Chinatown, and do we really not want to control rats? So they said, "Forget that old ordinance: we'll pass a new one that'll say we're going to ban all pesticides by the year 2000 except for this list of approved pesticides that the Department of the Environment is going to figure out, that will be consistent with IPM."

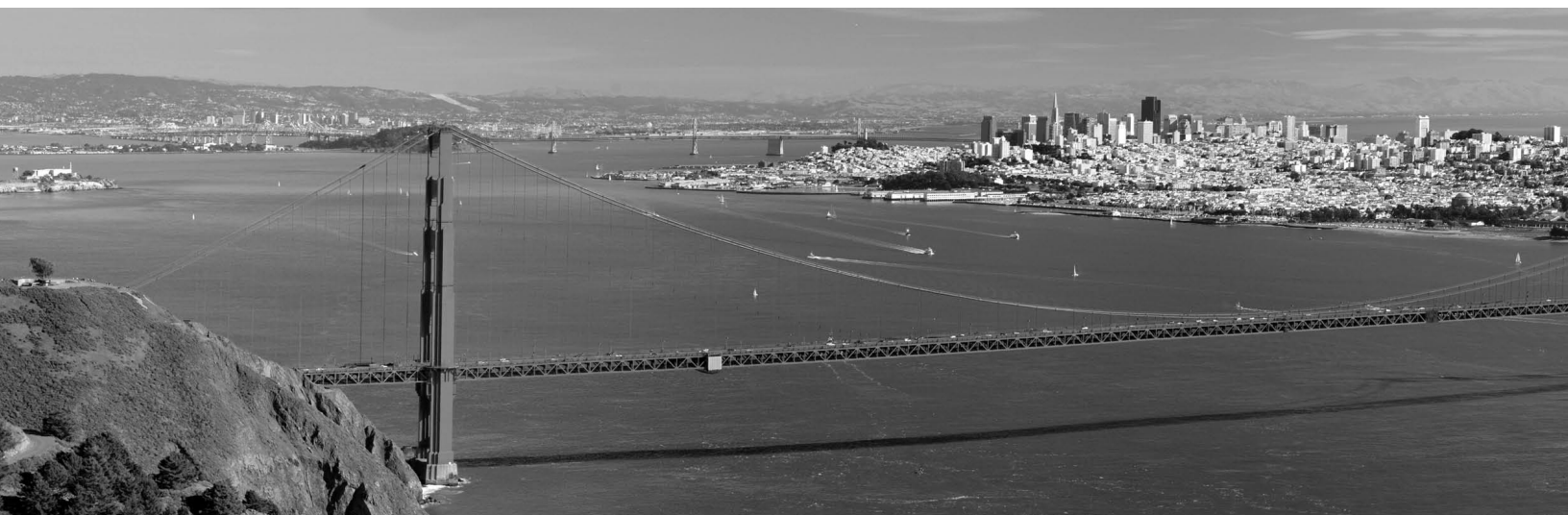
I joined the San Francisco city government in 1999, and in August of '99 and January of 2000 we had to come up with this list of approved pesticides. I spent a lot of time working on that list with Washington Toxics Coalition, and it was a really powerful process of looking at alternatives. But really, as you all know, IPM is more than a list of approved pesticides. It's all about a program of prevention, hiring a coordinator, and all the other pieces of a program. So I want to give you an example of how applying precautionary thinking to pesticide use ends up with phenomenal outcomes.

What we did was to ask our gardeners to ask the question, "Is

Roundup necessary?" not, "Is it safe?" because we could have talked for hours on that, but is it necessary? What we found over three years was that in 90% of the cases, Roundup was not necessary. We reduced our Roundup use by 90%. What did we replace it with? We replaced it with goats. Goats, it turns out, are amazingly useful when you have endangered species, because they don't step on the little frogs and snakes. They can eat around them. So it's cheaper than using people. We did hand weeding, we used green flammers, we looked at prevention in terms of mulch and sealing cracks, and we also did a little acceptance shifting. Now our gardeners who work in our major park, Golden Gate Park, don't say they grow lawns, they grow meadows. We like diversity. If it's green, fine.

But sometimes, when we ask the question "Is it necessary?" the answer is "yes." And we need to be big, enough people to see when that's true. In the case of Roundup, there were some times when Roundup was the alternative that minimized harm – our median strips on some really busy streets. And when we had gardeners out there trying to get those weeds with weed whips, little rocks were flying, and they were breaking windshields, and they were in danger of getting run over. So in those median strips and busy highways, Roundup minimized harm. At our airports, on the runways, the FAA has extremely tight height regulations – you know, for visibility – and so the gardeners there had a very small window of time when they could run out, get the weeds, and come back. So again, they're allowed to use Roundup. Interestingly our biggest champions of Roundup were not our gardeners, but they were the people from the native plants society. In their mind, the enemy is the invasive weed, not the chemical. And so in our natural areas, we actually use Roundup there as well, because that's what the Audubon Society and others want us to use it there. Of course, we use it extremely carefully.

So, what do we achieve when we've got precautionary pest management? We achieve this 90% reduction in Roundup and a 50-70% reduction overall. We've eliminated indoor sprays; we've eliminated the most toxic pesticides; we've eliminated pre-



emergent herbicides because they're not necessary. But the other thing it did was it really inspired innovation and creativity. Because we had a lot of people asking the question, "Is it necessary?" and there is a lot of creativity in what was possible as an answer. It improved morale and cooperation among agencies. We meet monthly as agencies (Recreation and Park, the airport, Public Health) to talk about what the alternatives are and what we can do. We have a training program and an awards program. So it has fostered this sense of cooperation.

Then it did something that was very unexpected and yet incredibly powerful and important for government. It increased the trust that the community had in us, so that we had the ability to use pesticides when they were necessary. That's because we had a transparent decision making process, clear criteria, an approved list, and accountability. Because all those things were in place, when we said, "Look, this pesticide is necessary for this reason," we didn't have a fight. So we had a vision, we had shared goals, a transparent decision making process, and no fight.

### Showing up

The other thing this logger said, that I think you guys live in your lives, is that *the world is run by those who show up*. I think that's really true. You guys are the ones who show up, and on the panel after me are some really specific examples of people who have shown up in their communities and made change. We know what IPM means here, we get it, we know. Who cares about definitions? We know in our hearts what it is. I believe that IPM is no longer an option; it's really mainstream at this point. It needs to be mainstream because it's the best way of doing things, and when we apply a precautionary decision making process we can push it even further.

### Third-party certification

So where do we need to show up? We need to start looking at third-party certification of pest-control contractors, making it easy



for the public. We need to look at the green building world, with the Leadership in Energy and Environmental Design (LEED) Green Building Rating System, because there are LEED-existing buildings that have a whole pesticide/pest-control [approach] – you get points for that. With LEED new construction, we need to look at how we design pests out of buildings and make that part of the green-building movement. We need to partner with the chemically sensitive: it's a question of accessibility to public structures, when chemically sensitive people can't use them because a pesticide's been sprayed. Everyone wants to be green. That's what we see in all the magazines, everyone wants to be considered green. Your job and my job is to make sure that that word "green" has meaning, that it's not some greenwashing principle that the Wal-Marts can attach themselves to by adopting minimal changes.

The other place I think we need to show up is –where's Carolyn Cox, my hero on this issue– related to public right to know and inerts (nondisclosed ingredients in pesticide products). There is an amazing moment right now where the federal government is looking at the inerts disclosure laws, and attorneys general from across the country are joining together to really fight this issue. We have a right to know what ingredients are in pesticide products. Carolyn is leading that charge. The City of San Francisco wrote a long letter explaining why we need inerts disclosure. I really recommend that you guys –you and your organizations– weigh in on this because they need to hear from a wide cross-section of people.

### Working together

So finally, IPM offers a powerful model for precautionary thinking. I invite all of you passionate activists and human beings to find some partners in unexpected places. Rolf Halden, Ph.D., said this yesterday that we need to be careful of silos. We can see those with us and those against us in pretty bright lines, when, in fact, change happens most when those lines get blurred, and when champions in government work with activists who work with elected officials. When that happens –along with industry that can give us the alternatives because they want to make a buck on the alternative– change is smooth. You can't stop it. What we need to find are those partners, so that we can work together toward a world with a common vision, this vision of "for caring." So that when we ask, "Is it legal?" we're confident that our laws are protective of all life. And, when we ask, "Is it safe?" there's sufficient data and testing so that we can really understand how the chemicals interact inside people, and inside ecosystems. And, when we ask, "Is it necessary?" affected communities are at the table. Our elected officials are empowered to examine all the alternatives, and to choose alternatives that minimize harm.

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