

By Carolyn Raffensperger

## Using Precaution In A U.S. Legal Context

**R**isk assessment is a useful tool in a simple, reductionist world with minor environmental or public health problems. But it is a failure for novel threats that are subtle and complex, such as climate change, endocrine disruption, the collapse of marine fisheries, or the hazards of biotechnology. Proponents of risk assessment argue that regulators have few alternative decisionmaking tools. When the precautionary principle is suggested, environmental professionals generally find the principle attractive, even compelling, but cannot imagine its being applied in a practical way in environmental regulation in the United States.

It is true that the precautionary principle can be found mostly in treaties. The United States is theoretically obligated to follow it as a signatory to the Earth Summit's Rio Declaration, which says: "In order to protect the environment, the precautionary approach shall be widely applied by states according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation." As readers know, however, the United States does not necessarily follow all international agreements it has signed.

To develop methods for implementing the precautionary principle in environmental and public health decisionmaking that would cover the broad reaches between international treaties and local issues, scholars, scientists, lawyers, and activists con-

vened at the Wingspread conference center in Wisconsin last year. The Wingspread conferees identified several key aspects of the principle. Three are consistent with language in U.S. environmental statutes, which shows that domestic law can be comfortable with a standard of precaution:

First, establish a general duty. The Occupational Safety and Health Act requires that an employer "furnish each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical injury."

Second, set goals. The precautionary principle encourages planning based on well-defined goals rather than on risk assumptions and calculations that may be riddled with bias and error. The Clean Water Act's policy of "zero discharge," despite the fact that it seems as far away as ever, is an example in one of our landmark laws that can be cited as Congress's goal.

Third, seek out and evaluate alternatives. Rather than asking what level of contamination is safe or economically optimal, the precautionary approach asks how to reduce or eliminate the hazard and considers all possible means of achieving that goal — including forgoing the proposed activity. Alternatives proposed to a potentially hazardous activity must be scrutinized as stringently as the activity itself. This method of posing alternatives to any given activity parallels requirements for an environmental impact assessment under the National Environmental Policy Act.

The precautionary principle invites the development in environmental regulation of legal concepts used in other areas of law. Two concepts identified by the Wingspread conferees should play a major role in U.S. environmental law where it deals with uncertainty.

First is to shift the burden of proof. The principle obligates proponents of an activity to prove that it will not cause undue harm to human health or ecosystems. The idea is that those who have the power, control, and resources to act and prevent harm should bear that responsibility. Resting the burden of proof on the proponents of an ac-

tion can be reinforced through assigning financial responsibility. For instance, regulators could require proponents of a new technology to post assurance bonds. If no harm occurs following the introduction of the technology into the environment, the bond is returned. However, if damage results from the technology, the proponent forfeits the bond.

The burden of proof can also be ensured by establishing a duty to monitor, understand, investigate, inform, and act. Under a precautionary decisionmaking scheme, those undertaking potentially harmful activities would be required to monitor the consequences of introducing a technology (with possible third-party verification), inform the public and authorities when a potential impact is found, and act to prevent more damage.

Finally, the precautionary principle requires that potentially affected parties participate in decisions, in weighing information in the face of uncertainty. Because difficult questions of causality and what preventive actions should be taken are inherently political, the public must be involved in the decision process. While notice and comment rulemaking, environmental impact assessment, and other information-forcing mechanisms abound in U.S. law, the legal system has a long way to go, especially in the area of science in health and environmental hazards, in ensuring the public is a true partner in decisionmaking.

The precautionary principle is a scientifically and ethically robust decisionmaking tool which has the potential to reverse the downhill slide of environmental destruction. Instead of asking what level of harm is acceptable, a precautionary approach changes the regulatory questions. How much contamination can be avoided? What are the alternatives to this product or activity, and are they safer? Is this activity even necessary? The precautionary principle changes the regulatory problem from measuring and managing risk to finding solutions and preventing harm.

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