

# Rachel's Environment & Health News

## #586 - The Precautionary Principle

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A new principle for guiding human activities, to prevent harm to the environment and to human health, has been emerging during the past 10 years. It is called the "principle of precautionary action" or the "precautionary principle" for short. (See REHW #257, #284, #319, #363, #378, #423, #539, #540.)

An international group of scientists, government officials, lawyers, and labor and grass-roots environmental activists met January 23-25 at Wingspread in Racine, Wisconsin to define and discuss the precautionary principle.[1] After meeting for two days, the group issued the following consensus statement:

### Wingspread Statement on the Precautionary Principle

"The release and use of toxic substances, the exploitation of resources, and physical alterations of the environment have had substantial unintended consequences affecting human health and the environment. Some of these concerns are high rates of learning deficiencies, asthma, cancer, birth defects and species extinctions, along with global climate change, stratospheric ozone depletion and worldwide contamination with toxic substances and nuclear materials.

"We believe existing environmental regulations and other decisions, particularly those based on risk assessment, have failed to protect adequately human health and the environment --the larger system of which humans are but a part.

"We believe there is compelling evidence that damage to humans and the worldwide environment is of such magnitude and seriousness that new principles for conducting human activities are necessary.

"While we realize that human activities may involve hazards, people must proceed more carefully than has been the case in recent history. Corporations, government entities, organizations, communities, scientists and other individuals must adopt a precautionary approach to all human endeavors.

"Therefore, it is necessary to implement the Precautionary Principle: When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically. In this context the proponent of an activity, rather than the public, should bear the burden of proof.

"The process of applying the Precautionary Principle must be open, informed and democratic and must include potentially affected parties. It must also involve an examination of the full range of alternatives, including no action." [End of statement.]

Thus, as formulated here, the principle of precautionary action has 4 parts:

1. People have a duty to take anticipatory action to prevent harm. (As one participant at the Wingspread meeting summarized the essence of the precautionary principle, "If you have a reasonable suspicion that something bad might be going to happen, you have an obligation to try to stop it.")
2. The burden of proof of harmlessness of a new technology, process, activity, or chemical lies with the proponents, not with the general public.
3. Before using a new technology, process, or chemical, or starting a new activity, people have an obligation to examine "a full range of alternatives" including the alternative of doing nothing.
4. Decisions applying the precautionary principle must be "open, informed, and democratic" and "must include affected parties."

The precautionary principle is not really new. The essence of the

principle is captured in common-sense aphorisms such as "An ounce of prevention is worth a pound of cure," "Better safe than sorry," and "Look before you leap." However, environmental policy in the U.S. and Europe for the past 70 years has been guided by entirely different principles perhaps best reflected in the aphorisms, "Nothing ventured, nothing gained" and, "Let the devil take the hindmost."

Participants at the Wingspread meeting came from the U.S., Canada, Germany, Britain, and Sweden.

"Precaution is natural in our lives," said Gordon Durnil, a lawyer from Indianapolis, Indiana and author of *THE MAKING OF A CONSERVATIVE ENVIRONMENTALIST*. (See REHW #453.) "From my perspective as a conservative Republican, this is a conservative principle." During the Bush administration, Durnil served as chairperson of the International Joint Commission (IJC), established by treaty to resolve Great Lakes problems between the United States and Canada. (See REHW #284, #378, #505.)

Joel Tickner of the University of Massachusetts at Lowell, said "Current decision-making approaches ask, 'How safe is safe? What level of risk is acceptable? How much contamination can a human or ecosystem assimilate without showing any obvious adverse effects?' The approach stemming from the precautionary principle asks a different set of questions: 'How much contamination can be avoided while still maintaining necessary values? What are the alternatives to this product or activity that achieve the desired goal? Does society need this activity in the first place?'"[2]

Participants noted that current policies such as risk assessment and cost-benefit analysis give the benefit of the doubt to new products and technologies, which may later prove harmful. And when damage occurs, victims and their advocates have the nearly-impossible task of proving that a particular product or activity was responsible.

Carolyn Raffensperger, coordinator of the Science and Environmental Health Network (SEHN) says, "The role of science [in decision-making] is essential. But the public must be fully involved. Informed consent is just as essential."

Author Sandra Steingraber (see REHW #565) told the Wingspread meeting that the precautionary principle suggests certain kinds of arguments that grass-roots activists might use at the local level:

- 1) When toxic chemicals enter our bodies --or the bodies of our children --without our informed consent, it is a toxic trespass. Such a trespass is wrong and almost everyone recognizes that it is wrong.
- 2) A recent study by the Harvard Center for Cancer Prevention concluded that only 2% of cancer deaths are caused by industrial toxins released into the environment. Steingraber points out that, if we accept such an estimate at face value, this 2% represents the painful deaths of nearly 11,000 individuals each year in the U.S. alone --the annual equivalent of wiping out a small city, thirty funerals every day. And these deaths represent a form of homicide. Such homicides are wrong and almost everyone recognizes that they are wrong.
- 3) We all have a fundamental human right to enjoy our environment free of fear. Those who put toxic chemicals into the environment --whether as wastes or as products --deny us this human right. Almost everyone recognizes that such a denial of human rights is wrong.

At the policy level, Wingspread participant Robert Costanza of the University of Maryland has suggested an "assurance bond" --which he has dubbed the "4P approach to scientific uncertainty." (See REHW #510.) The "4P" stands for "the precautionary polluter pays principle." Using the "4P" approach, before a new technology, process or chemical could be introduced, the worst-case damage

would be estimated in dollar terms. Then the proponent of the new activity would be required to post a bond for the full amount before startup.

Such "assurance bonds" are common in the construction industry today, to assure that a job will be completed on schedule. A "4P" bond would effectively shift the burden of proof onto the proponent --if harmlessness could be shown as time passed, some or all of the bond would be returned (with interest). A "4P" bond would also give the proponent powerful financial incentives to reduce the worst case damages by, for example, adopting intrinsically less-damaging alternatives. The "4P" bond would also give the proponent a financial incentive to continually examine the effects of the new activity --if damages could be shown to be less than the worst-case estimate, part of the bond could be returned (with interest) but the burden of proof for such a showing would remain with the proponent.

It seems unlikely that the precautionary principle will replace the risk assessment approach to environmental protection in the U.S. any time soon. Opposition from the chemical industry alone would probably be sufficient to prevent that. A number of advisors to the chemical industry have called the precautionary principle unscientific and dangerous. For example, Jack Mongoven of the public relations firm MBD (Mongoven, Biscoe and Duchin in Washington, D.C.), has advised the chemical industry to "mobilize science against the precautionary principle." (See REHW #496.)

Mr. Mongoven says the precautionary principle is antagonistic to science, has its origins in instinct and feeling, and "threatens the entire chemical industry." [2]

True, the precautionary principle does shift the burden of proof for harmlessness onto the producers of toxic chemicals. Most people readily accept such a shift in the case of the pharmaceutical industry, which must show safety and efficacy before marketing a new drug. The rationale for placing such requirements on the drug corporations was that humans would be directly exposed to drugs, so safety had to be shown and the need for the new drug established. Today we know that all landfills leak, incinerators don't fully destroy toxic chemicals, and humans are therefore exposed to low levels of essentially every industrial chemical released into commercial channels (whether as waste or as product). Therefore, the rationale for U.S. pharmaceuticals policy would logically lead to the conclusion that all industrial chemicals should be treated the same as drugs: the burden of proof of harmlessness (and proof of need) should fall on the producer.

To assure that producers have confidence in their own estimates of harmlessness, the worst-case "4P" bond would serve nicely. (The 4P bond simply asks the chemical corporations claiming "no problem" to put their money where their mouths are.) If the producer's estimate of harmlessness turned out to be wrong, the large bond would be forfeited to pay the incurred costs. Those who say they favor market-based solutions to environmental problems should warmly embrace such an efficient and fiscally-responsible precautionary proposal.

--Peter Montague (National Writers Union, UAW Local 1981/AFL-CIO)

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[1] Wingspread participants (affiliations are noted for identification purposes only): Nicholas Ashford, Massachusetts Institute of Technology; Katherine Barrett, University of British Columbia; Anita Bernstein, Chicago-Kent College of Law; Robert Costanza, University of Maryland; Pat Costner, Greenpeace; Carl Cranor, University of California, Riverside; Peter deFur, Virginia Commonwealth University; Gordon Durnil, attorney; Dr. Kenneth

Geiser, Toxics Use Reduction Institute, University of Mass., Lowell; Dr. Andrew Jordan, Centre for Social and Economic Research on the Global Environment, University Of East Anglia, Britain; Andrew King, United Steelworkers of America, Canadian Office, Toronto, Canada; Frederick Kirschenmann, farmer; Stephen Lester, Center for Health, Environment and Justice; Sue Maret, Union Institute; Dr. Michael M'Gonigle, University of Victoria, British Columbia, Canada; Peter Montague, Environmental Research Foundation; John Peterson Myers, W. Alton Jones Foundation; Mary O'Brien, environmental consultant; David Ozonoff, Boston University; Carolyn Raffensperger, Science and Environmental Health Network; Pamela Resor, Massachusetts House of Representatives; Florence Robinson, Louisiana Environmental Network; Ted Schettler, Physicians for Social Responsibility; Ted Smith, Silicon Valley Toxics Coalition; Klaus-Richard Sperling, Alfred-Wegener Institut, Hamburg, Germany; Sandra Steingraber, author; Diane Takvorian, Environmental Health Coalition; Joel Tickner, University of Mass., Lowell; Konrad von Moltke, Dartmouth College; Bo Wahlstrom, KEMI (National Chemical Inspectorate), Sweden; Jackie Warledo, Indigenous Environmental Network.

[2] Bette Hileman, "Precautionary Principle," CHEMICAL & ENGINEERING NEWS [C&EN] February 9, 1998, pgs. 16-18.

[3] Harvard Center for Cancer Prevention, "Harvard Report on Cancer Prevention," CANCER CAUSES AND CONTROL Vol. 7, Supplement 1 (1996), pgs. 3-59.

Descriptor terms: precautionary principle; wingspread; regulation; meetings; wingspread statement on precaution; risk assessment; jack mongoven; mbd; chemical industry; gordon durnil; ken geiser; carolyn raffensperger; science and environmental health network; sehn; ijc; joel tickner; sandra steingraber; harvard center for cancer prevention; robert costanza; 4p assurance bonding; assurance bonds; burden of proof; alternatives assessment; pharmaceuticals policy;