

IMPLICATIONS OF THE PRECAUTIONARY PRINCIPLE FOR ENVIRONMENTAL REGULATION IN THE UNITED STATES: EXAMPLES FROM THE CONTROL OF HAZARDOUS AIR POLLUTANTS IN THE 1990 CLEAN AIR ACT AMENDMENTS

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INTRODUCTION

In this Article we take a cautionary approach to the Precautionary Principle. **We argue that the hazardous air pollutant provisions of the 1990 Clean Air Act Amendments provide an example of the Precautionary Principle incorporated into U.S. environmental legislation.** Evaluating the outcome thus far leads us to the conclusion that utilizing the Precautionary Principle as a basis for legislation can be problematic to public-health goals. Our reasons for this conclusion include the potential inhibition of the development of more effective air pollution control technology once the regulations have been written, the inhibitory effect on further research and the demonstration of health benefit, and the loss of focus on those hazardous air pollutant compounds and sources that provide the greatest likelihood for toxicity and misplaced focus on individual rather than population exposure—a loss of focus that undermines the public-health basis of the Clean Air Act.

...Many advocates of more expansive environmental and public-health control measures urge prolific use of the Precautionary Principle as a rationale for regulatory intervention. One of the earliest and substantial formulations of the Precautionary Principle was adopted in the 1992 Rio Declaration... Yet, the Precautionary Principle is a broad statement of principle, subject to varying interpretations. **More recent formulations, such as the Wingspread Statement,² have moved away from Rio's emphasis both on cost effectiveness and how serious a threat must be to invoke the Precautionary Principle, and have extended the Precautionary Principle to address protection of public health as well as the environment.** (pp. 247-248)

Such broad statements can be very valuable, even if vaguely defined. **Precaution is a universal value similar to “sustainable development,” which serves as a rather amorphous rallying cry for many divergent interests that support economic development in a**

manner that does not harm the environment.³ It is hard to imagine that anyone is against sustainable development. The Precautionary Principle also is supportable as a primary preventive approach that is as old as the Hippocratic Oath's adjuration: "Above all do no harm." (p. 248)

"...**A major motivation for advocacy and action under the Precautionary Principle is a sense of frustration with the slow pace of science and risk-based regulation**. This is understandable. An all-too-familiar ploy of industry is to obstruct or delay risk-based regulation by requesting more scientific study⁵ or challenging its scientific validity in the courts.⁶ **Even when ultimately unsuccessful, such challenges often delay regulation by years.** (pp. 248-249)

However, **to some advocates of the Precautionary Principle** this is not simply an issue of when there is sufficient information to make a decision. Rather, **the Precautionary Principle involves concepts of deconstructionism and *postmodern* science and democracy, the need to replace a non-democratic technocracy with a more humanistic and community-oriented approach to decisionmaking**.⁹ To these supporters of the Precautionary Principle, **risk assessment and its practitioners are a threat to the future of our planet and the Precautionary Principle is seen as an effective means to firmly shift the burden of proof onto the would-be polluter.**¹⁰

The Precautionary Principle can be considered generally under two headings:¹¹

1. Precautionary actions that supplant standard risk-based approaches through actions based upon the threat of a problem without sufficient information to assign risk, or through shifting the burden of proof to the presumption of harm. We will call these "pre-emptive precautionary approaches."

2. Precautionary actions that take more prudent approaches to risk assessment and increase risk management activity, for example, by establishing more conservative default assumptions to risk assessment, or through choosing a more stringent risk level on which to base regulatory controls, or by adding additional safety factors. We will call these "risk-based precautionary approaches."¹²

While many risk professionals view the Precautionary Principle not as something new, but merely as another call to build further prudent assumptions and safety factors into risk assessment and risk management,¹³ **the regulation of hazardous air pollutants (“HAPs”) in the 1990 Clean Air Act Amendments¹⁴ (“CAAA”) embodies pre-emptive precautionary actions that supercede risk assessment** and establish a new principle for regulatory intervention.

We have evaluated **the 1990 CAAA** concerning HAPs as it is our belief that **in such legislation Congress radically altered the United States’ approach to regulating HAPs by a classic imposition of the Precautionary Principle**.¹⁵ (pp. 249-250)