

Retrospective on U.S. Health Risk Assessment: How Others Can Benefit*

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Introduction

As broadly defined, risk assessment can be used to predict the likelihood of many unwanted events, including industrial explosions, workplace injuries, failures of machine parts, natural catastrophes, injury or death from an array of voluntary activities, diseases, natural causes, life-style or others.¹ Thus, an extraordinary number of publications on risk assessment deal with a wide range of topics.²

Health risk assessment, however is a separate and distinct discipline which uses toxicology data collected from animal studies and human epidemiology, combined with information about the degree of exposure, to quantitatively predict the likelihood that a particular adverse response will be seen in a specific human population.³ The assessment of toxicology data to predict health risks is not entirely new;⁴ the risk-assessment process has been used by agencies for

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¹ *Societal Risk Assessment: How Safe is Safe Enough?* (Richard C. Schwing & William A. Albers Jr., eds. 1980); Christopher F. Wilkinson, *Risk Assessment and Regulatory Policy*, 1 *Comments Toxicol.* 1 (1987); Richard Wilson & Edmund A.C. Crouch, *Risk Assessment and Comparisons: An Introduction*, 236 *Science* 267 (1987); Paul Slovic, *Perception of Risk*, 236 *Science* 280 (1987); Ben J. Wattenberg, *The Good News is the Bad News is Wrong* (1984) and W. Kip Viscusi, *Fatal Tradeoffs: Public and Private Responsibilities for Risk* (1992).

² Dennis J. Paustenbach, *The Risk Assessment of Environmental Hazards: A Textbook of Case Studies* (1989).

³ *Id.* and National Academy of Sciences (NAS), *Science and Policy in Risk Assessment* (1994).

⁴ Carol S. Weil, *Statistics Versus Safety Factors and Scientific Judgement in the Evaluation of Safety for Man*, 21 *Toxicol. Appl. Pharmacol.* 454 (1972) and William W. Lowrance, *Of Acceptable Risk* (1976).