

# Human Health Focus Group

This presentation represents the work of the Human Health Focus Group members:

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# Overview of Risk Assessment Human Health Focus Group



# Risk Assessment in the Federal Government

1983 National Research Council Paradigm

Risk = Hazard X Exposure (“Red Book”)



## Risk Assessment

The likelihood of injury, disease or death due to exposure to environmental pollutants

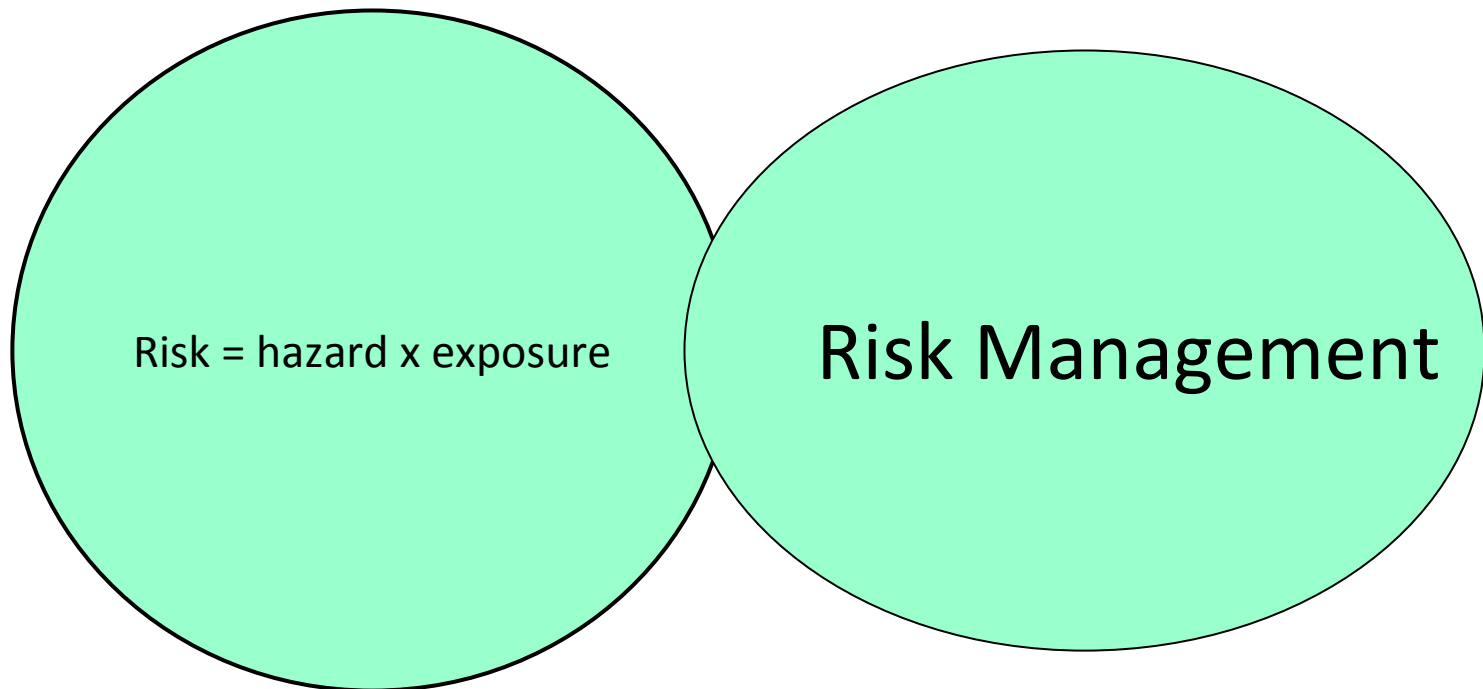
Communicating Science: clear and transparent.

Scientific evidence: objective, reliable, tested, credible, systematic, reproducible, and capable of being proved false.

# Risk Assessment in the Federal Government

1983 National Research Council Paradigm

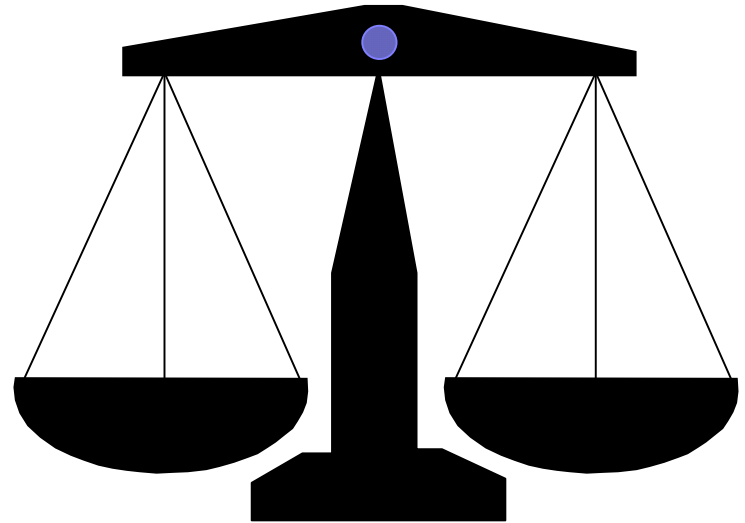
Risk = Hazard X Exposure (“Red Book”)



# Risk Management in the Federal Government

## Things to Consider when Managing Risks...

- **Uncertainties in the estimates**
- **Worker and community health**
- **Effectiveness and costs of options for reducing risk**
- **Economic, social, cultural, ethical, legal, and political implications**
- **Ecological implications**
- **Existing laws and procedures**
- **Etc.**



# Risk Assessment and Risk Management in the Federal Government

- “Science and law are thus partners at EPA, but uneasy partners.” William Ruckelshaus, former EPA administrator, *Science* 1983
- “We must search for law that reflects an understanding of the relevant underlying science, not for a law that frees companies to cause severe harm or forces them unnecessarily to abandon the thousands of artificial substances on which modern life depends.” Breyer. 1998 Chief Justice, US

# ***Retrospective Risk Assessment***

***Determine if there is the likelihood of injury, disease, or death as a result of exposure to pollutants that have been or may be released into the environment.***



# Prospective Risk Assessment

*Predicting the likelihood of injury, disease, or death due to exposure to chemicals released into the waters of the US.*



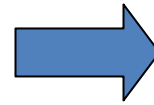
# Prospective Risk Assessment –

*predicting*

*The likelihood of injury, disease, or death due to exposure to pesticides sprayed on plants.*



Farm



Processing  
Industries



Food Forms

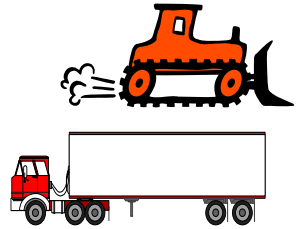
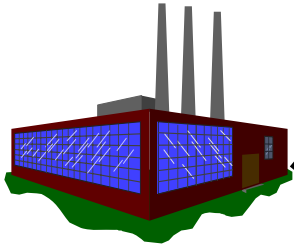


Retail Foods

# Prospective Risk Assessment

*Predicting the likelihood of injury disease  
Or death due to exposure to pollutants released  
Into the air*

Point Sources



Mobile Sources



Area Sources

**Total  
Emissions  
(tons/year)**

*Ambient air  
concentrations  
(ug/m<sup>3</sup>)*



***Risk Assessment of adverse health effects does not include an assessment of the benefits of eating fish and drinking water***

