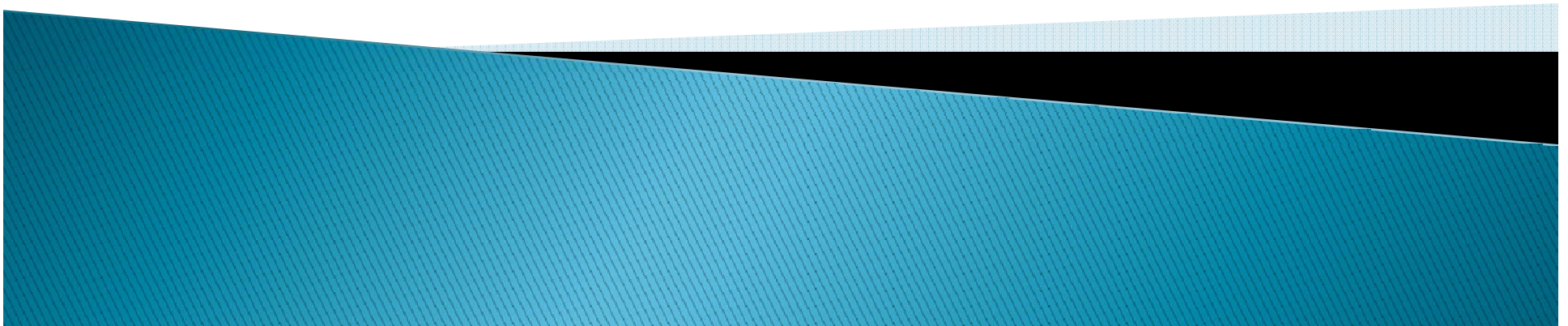


US EPA ARCHIVE DOCUMENT



Communication of Science & Policy

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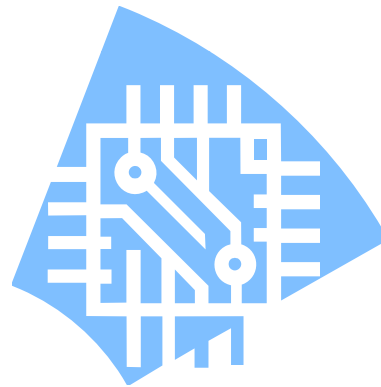
Science and Risk Communication

- ▶ Science is the basis for risk communication
- ▶ Perception can trump science
- ▶ Communication is the bridge



The Science is Changing

- ▶ New risk assessment inputs
- ▶ Changes to the pace of testing
- ▶ Enhanced support for priority setting
- ▶ Screening and targeting for testing



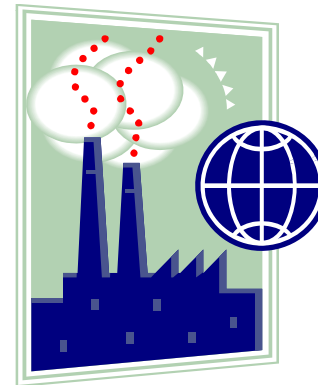
Risk Perception

- ▶ Traditional definition

$$\text{Risk} = \text{Hazard} \times \text{Exposure}$$

- ▶ Public view of risk

$$\text{Risk} = \text{Hazard} + \text{Outrage}$$



Risk Perception

- ▶ Principles of risk perception have not changed
- ▶ Peter Sandman and Vincent Covello elucidated these ideas decades ago



Some Examples of Outrage Factors

- ▶ Fair versus unfair
- ▶ Ethical versus unethical
- ▶ Ability to detect the risk
- ▶ Adults versus children
- ▶ Clear benefits versus little or no benefit
- ▶ Degree of scientific certainty about the risk



Gaining Trust

- ▶ Communication early and often
- ▶ Focus on developing and understanding & acceptance of the science
- ▶ Determine who is the best party to provide information (may not be the government!)
- ▶ Be consistent
- ▶ Be clear—no jargon
- ▶ Understand the concerns of the audience



Explaining Changes in Science

- ▶ Motivation to learn affects success
- ▶ The new science may reveal a different view of a risk
 - People who are frightened, angry, and feel powerless often resist new information showing risks are low
 - People who are optimistic and overconfident may resist information showing high risks
- ▶ Clear, complete explanations are necessary, especially for complex information

Pesticide Issues & Risk Communication

- ▶ Pesticide risk assessment includes determination of the lowest level at which effects occur and the level at which no effects are observed
- ▶ Regulation based on effect that occurs at the lowest level—is protective against all effects
- ▶ People sometimes focus on a specific effect, e.g., cancer
 - The effect of concern to regulators may be a different effect because it occurs at a lower level
 - Therefore, our regulation also protects against the cancer risk
 - Communicating that can be challenging

Earning Trust and Credibility

- ▶ It's harder to overcome negative risk perception
- ▶ People need to be involved in the decision process
 - No mixed messages
 - Listen to all groups
 - Explain the process
 - Follow-up/only make promises you can keep
 - Coordinate internally
 - Go back to the basics to build trust

Traditional Outreach Methods

- ▶ Press
- ▶ Website
- ▶ Meetings/workshops

Still the
basis for
getting the
word out



New Communication Approaches

- ▶ Communication has changed in the era of social media
 - Tools are refreshed, adding to the resources
 - More interactive, e.g., discussion forums (comments less formal, easier-to-access than dockets)
 - Twitter/Facebook provide both outreach and feedback tools
 - monitor comments
 - search related topics



Bottom Line

- ▶ Communicate early & often
- ▶ Be authentic in your communication
- ▶ Develop two-way communication
- ▶ Realize that emotions can affect responses
- ▶ Take responsibility for the message & the outcome