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HUMAN HEALTH RESEARCH PROGRAM
BUILDING A SCIENTIFIC FOUNDATION FOR SOUND ENVIRONMENTAL DECISIONS

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Workshop on Assessing the Public Health Impacts
of Risk Management Decisions




January 22, 2008

ORD Human Health Risk Assessment Research Strategy

Future Directions 2001

Fundamental Research to Improve the Scientific Foundation of Risk Assessment

Elucidate major mechanistic determinants of exposure-dose-effect continuum leading to development of improved risk assessment methods to

-  **Harmonize cancer and non-cancer assessments**
-  **Characterize risk to susceptible subpopulations**
-  **Assess aggregate and cumulative risk**

Conduct research to enable evaluation of public health outcomes from environmental risk management actions

Public Health Outcomes Research, 2001

Long-Term Goal

Provide the scientific understanding and tools that assist the Agency and others in evaluating changes in environmental public health resulting from risk management actions.

Overarching Scientific Questions

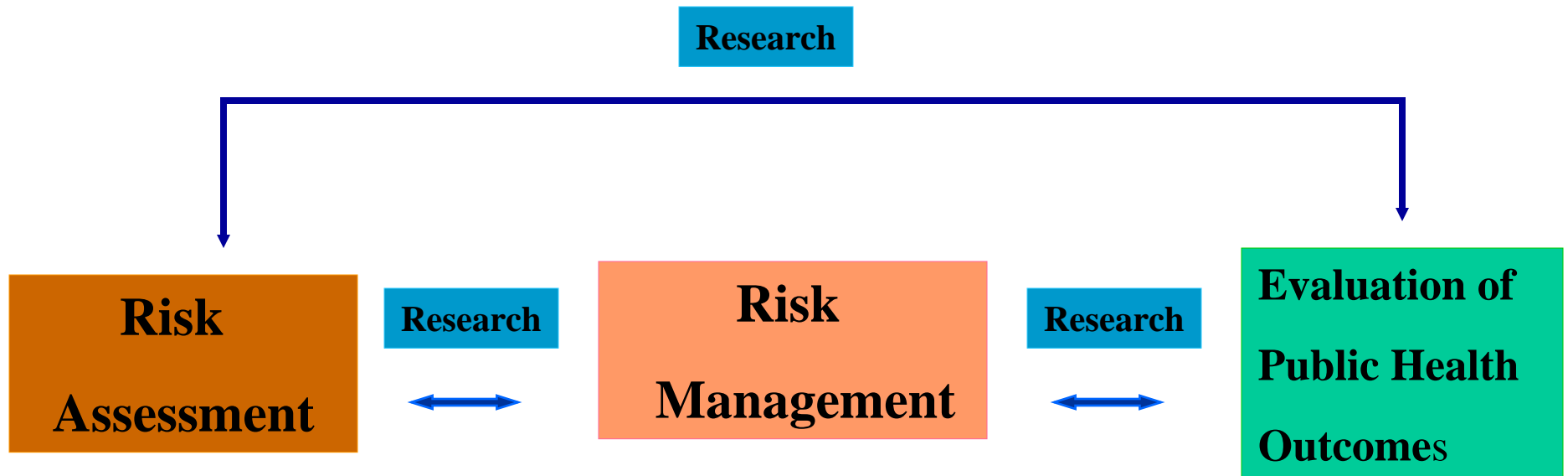
How can the most effective tools, systems, and methods be integrated into a decision-making framework to assist federal, State, and local decision makers in evaluating changes in public health as a result of environmental decisions?

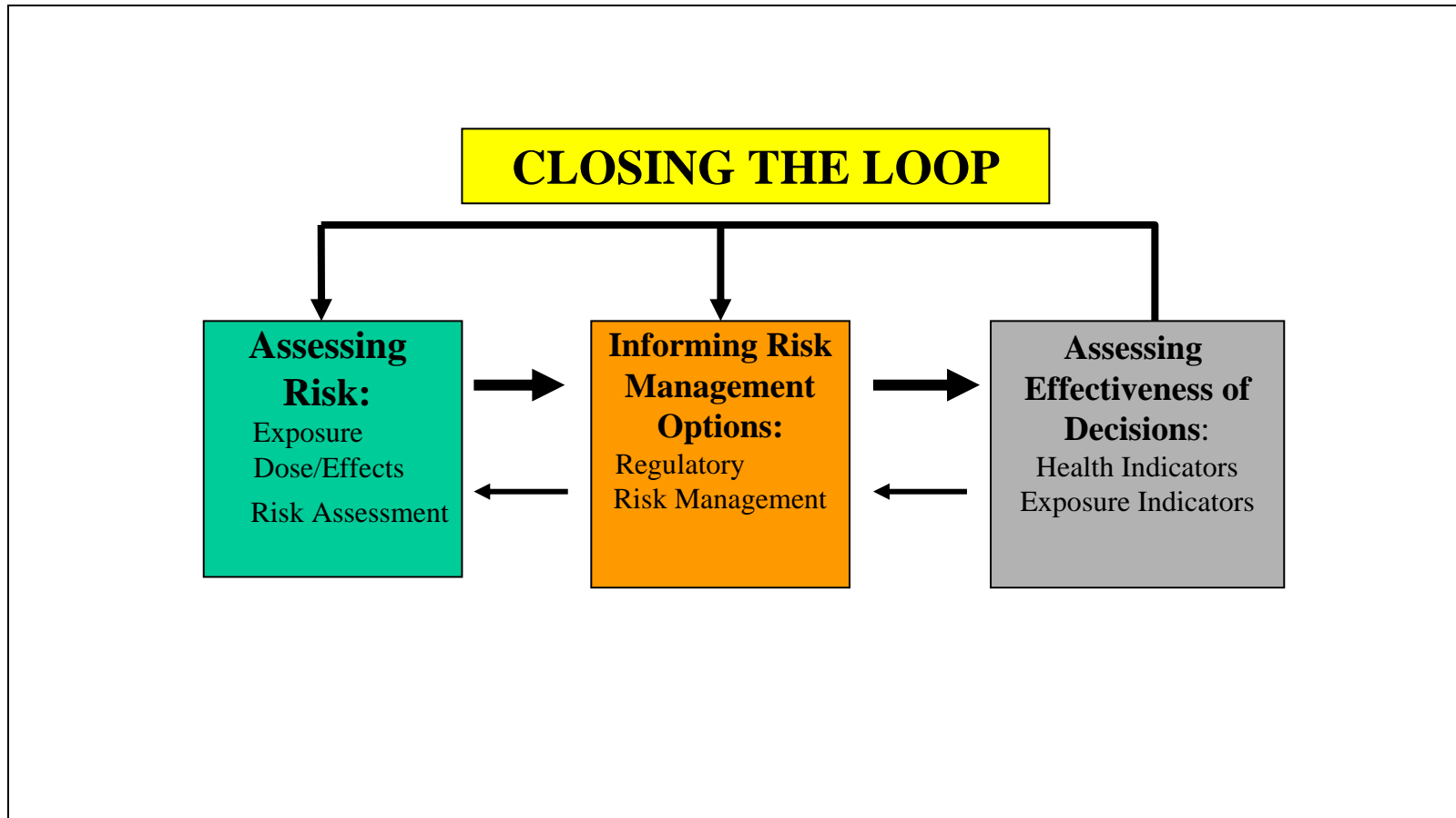
What is the ability of this framework to accurately measure such changes?

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LTG 4: Risk assessors and risk managers use ORD's methods and models to evaluate risk management decisions

Role of Research in Assessment of Health Outcomes in the Risk Assessment and Risk Management Process, 2001





Public Health Outcomes Research General Considerations, 2001

- **Require full participation of internal and external stakeholders**
- **Build on non-EPA research, e.g.**
 - *WHO's European Region environmental monitoring systems*
 - *WHO's Environmental Burden Disease*
- **Strong collaboration across ORD and STAR program**
- **Need additional extramural dollars**

FY 02-03

Development Phase

By 2003, provide an evaluation of available tools, systems, methods that can be used to assess impact of environmental decisions



FY 04-07

Implementation Phase

By 2004, deliver a detailed plan for improving existing tools, systems, methods

By 2005, provide a preliminary set of improved tools, systems, methods

By 2006, provide pilot evaluation of public health comes by using case studies



FY 08-09

Conclusion Phase

By 2007, deliver preliminary guidance with frameworks, tools for health outcomes evaluation

By 2008, demonstrate the use of frameworks & tools via case examples

By 2009, deliver final guidance and tools for health outcomes evaluation

2001

FY 02-03

Development Phase

Workshop held with CDC (2004)
Studies from NCER, NERL, NHEERL begin as part of ORD's program (2002-2006)

FY 04-07

Implementation Phase

ORD begins internal solicitation from program offices and regions (2005)

NCER RFA (2006 2007)

ORD funds two pilot projects (2006)

EPA completes ROE 04 and ROE 08?

White paper on Accountability completed (2007)

FY 08-15

Conclusion Phase
Implementation
Continues

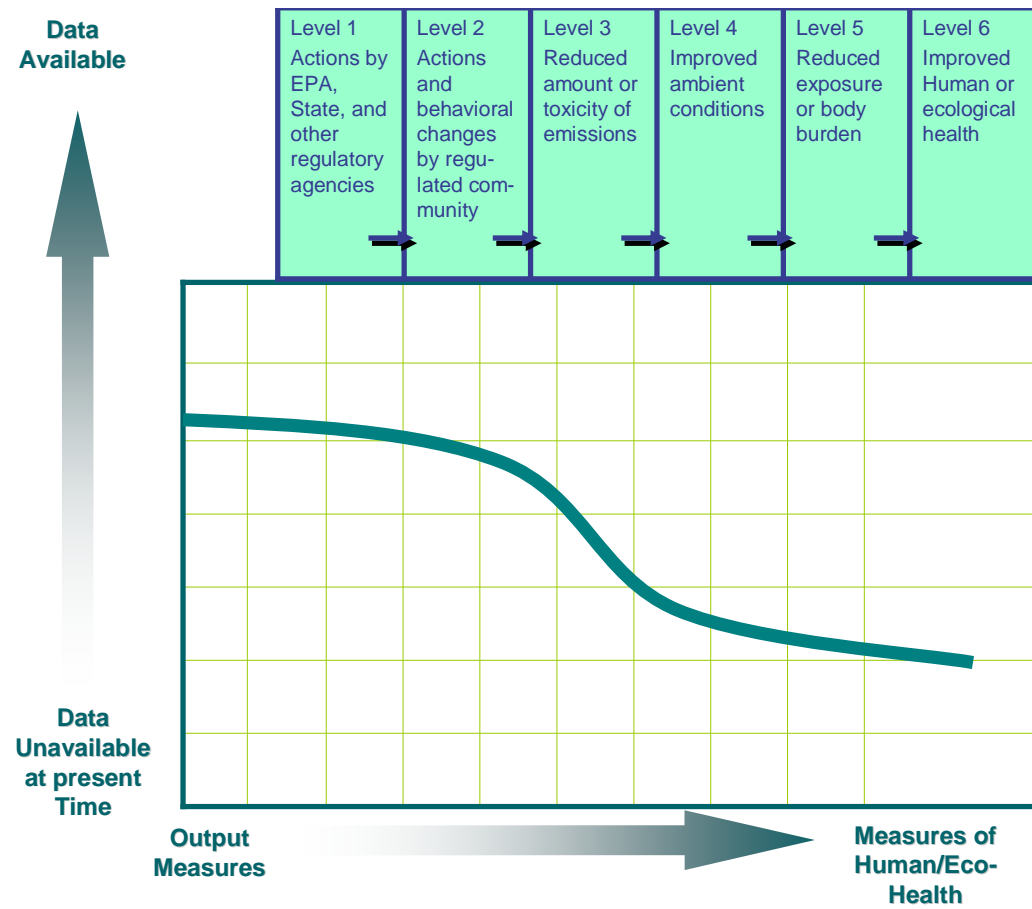
Workshop (2008)
Placeholder(S)

2008

- **What's new today?**
- **Report on the Environment!**

Assessing the Public Health Impacts of Risk Management Decisions – a problem of linkages

The Agency has Indicators that it has historically used to evaluate effects of and compliance with regulatory actions and advisories



Framework for Indicator Research

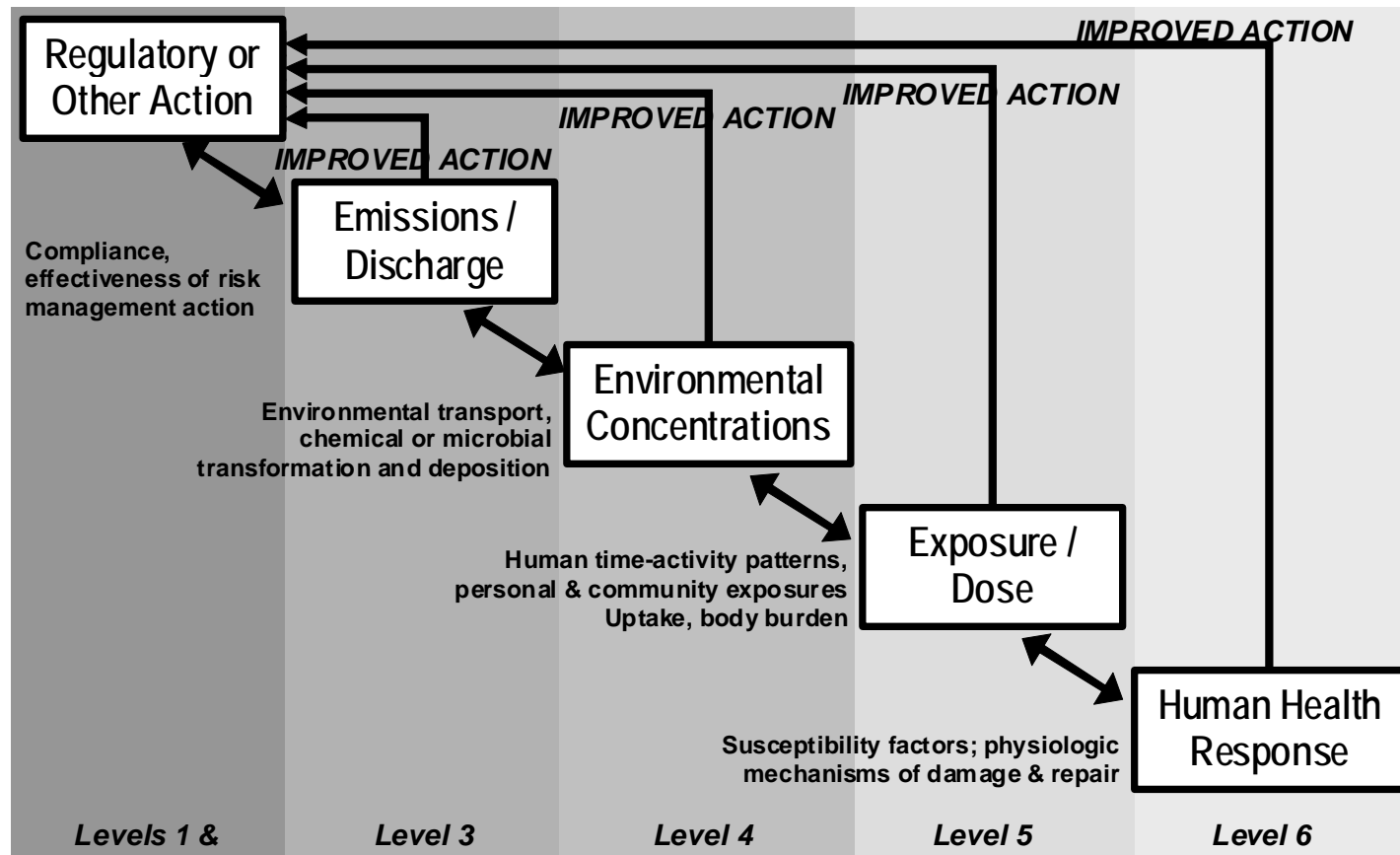
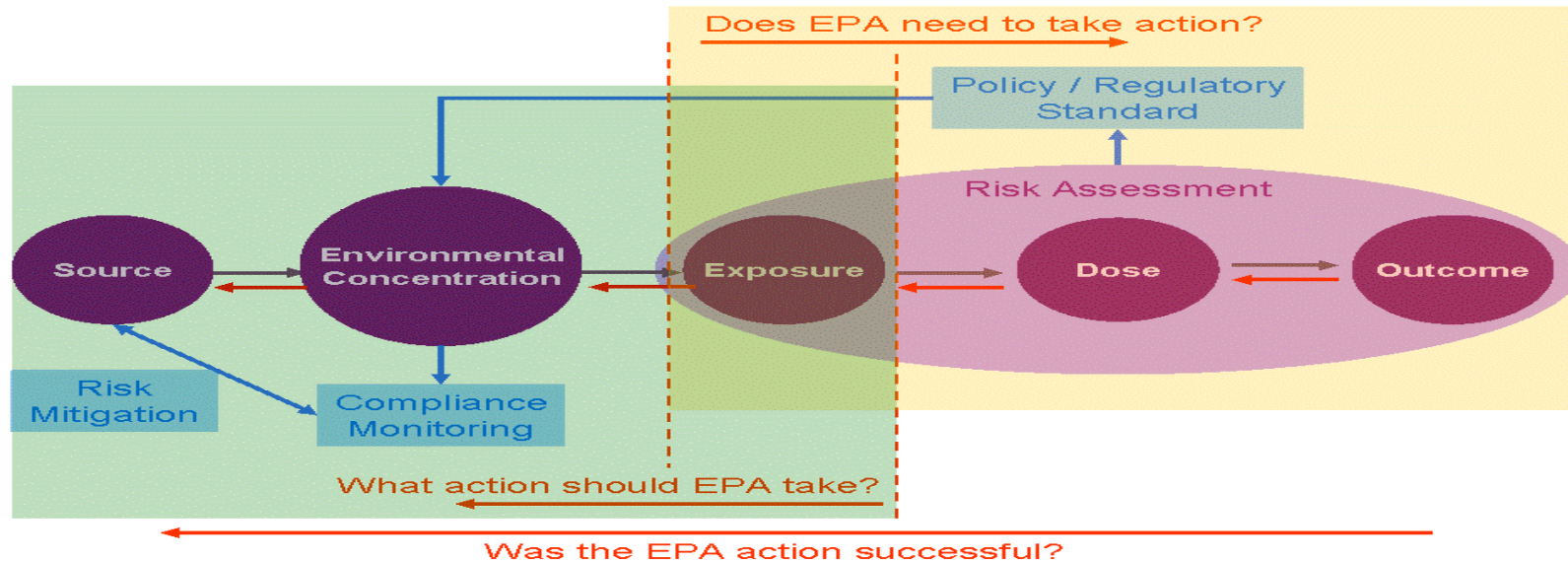


Figure 4. Essential Framework Guiding Research on Indicator Development

- **What's new today?**
 - **Increased role for models!**
 - **Increased role for epidemiology!**
 - **Increased role for toxicology!**

Source to Effects Models



The Workshop, January 22-23, RTP

Workshop Goal: Understand research needed to develop and validate indicators that can be used to assess the public health impacts of risk management decisions.

- Recommendations for research that fits ORD's capabilities
- Information to develop an implementation plan for conducting needed research within ORD

January 22nd – Plenary talks (indicators, PH tracking, pilot projects)

January 23rd – Break-out sessions

- Clean Air Interstate Rule
- Arsenic in Drinking Water
- Cholinesterase Inhibiting Pesticides

Sample Charge Questions:

- Is there compelling Agency interest?
- Are databases available for the endpoint?
- Which environmental stressors have been associated with the health effect?
- What is known about linkages in the source-to-effect paradigm for the chemicals and health point of interest?
- Are there linkages to issues addressed through problem-driven MYPs?

My Charge to the Workshop

- **Choose wisely but don't be afraid to take risks.**
- **Think outside the box.**
 - **Innovation on selection of endpoints.**
- **Think multidisciplinary teams.**
- **Think new partnerships**