



Perspectives on Climate Change Research and Health: Managing the Agenda

**Dr. Pai-Yei Whung
Chief Scientist**

U.S. EPA - Office of the Science Advisor

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Climate Change and Health: Mitigation Strategies

- Black Carbon and Air Quality – potential co-benefit for mitigation and health
- Carbon Sequestration and Underground Injection Control – regulatory efforts under the Safe Drinking Water Act
- Advanced Notice of Proposed Rulemaking – In July 2008, EPA published this preliminary analysis and request for comments concerning the regulation of greenhouse gas emissions under the Clean Air Act. This ANPR discusses the respective advantages of market-based mechanisms, including a carbon tax and cap-and-trade programs. The reduction of emissions could have broad health benefits.



Climate Change and Health: Adaptation Strategies

- Water Resource Adaptation Program (WRAP)
 - An EPA research program that provides local water resource managers with data, tools, and engineering solutions to adapt water resources (e.g., watersheds and infrastructure) to climate change.
- Air quality
 - EPA air quality models are beginning to incorporate climate change and reflect the health outcomes of climate change for decision makers.



EPA's Perspective on Climate Change and Health

- Mission: “Protect human health and the environment”
- Core competencies with examples related to climate change:
 - Air Quality – increased temperature interactions with tropospheric ozone
 - Water Quality – drought impacts on contaminant concentrations in reservoirs
 - Pesticides and Toxic Substances – heavy rainfall impacts on agricultural runoff and surface water
 - Solid Waste and Remediation
 - Environmental Technology
 - Risk Assessments
 - Decision Sciences



Environmental Technology

- Through its Environmental Technology Council, the EPA is considering supporting commercialization projects related to climate change and health, such as:
 - Monitoring technologies for geologically sequestered CO₂ to avoid dangerous leaks
 - Multi-sensors for rapid detection of microbial pathogens in drinking water
 - Rapid sensors for harmful algal blooms in fresh water



A New Approach to Risk Assessment that Incorporates Climate Change

- Human health and ecological risk assessment are fundamental to EPA's science and regulatory activities.
- Risk assessment is a tool to assess chemical contaminants' and toxics' impact on human health and the environment. Risk assessment is used to establish standards for air quality, water quality, pesticides, solid waste, etc.
- As the climate changes, the approach to risk assessment should also change. Parameters should be updated and climate change data added to analyses across all of EPA's media programs.



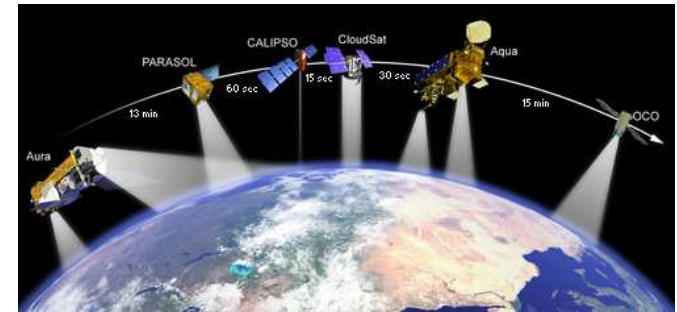
Decision Sciences

- Ongoing activities
 - Using economic tools to evaluate climate change impacts
- Future directions
 - Developing and integrating analytic decision-making tools for all science priorities
 - Moving toward an integrated systems approach



US GEO – A platform for interagency collaborations and cooperation.

- **Vision:** Decisions and actions for human benefit are informed by coordinated Earth observations. The 76 member countries will integrated Earth observing systems (satellites, buoys, weather stations, and other instruments).
- **Benefits:** This collection of data and models can advance our environmental understanding to support 9 societal benefit areas: weather forecasting, loss from disasters, oceans, mitigate and adapt to climate variability and change, sustainable agriculture, human health and well-being, ecology, water resources, and energy resources.
- An existing **opportunity** for new collaboration.





Thank you!

Dr. Pai-Yei Whung

whung.pai-yei@epa.gov

202-564-6483

