



EPA's 2007 Report on the Environment: Science Report

SAB Panel for the Review of EPA's 2007 Report on the Environment
Public Teleconference
June 22, 2007



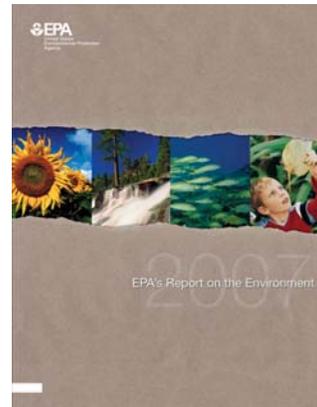
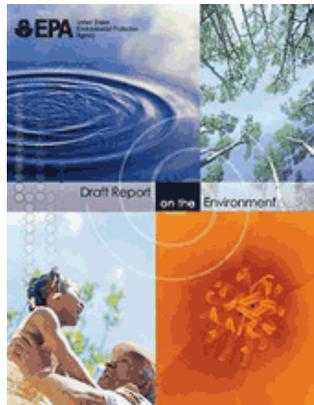
Office of Research and Development
National Center for Environmental Assessment



“My goals for the Agency are to make our air cleaner, our water purer and our land better protected. These are the results that we are working hard to achieve. Our progress towards these goals will be the measure of our success. *To know whether we are making progress toward these goals, we need high quality information about the state of the environment.* –

Christine Todd Whitman, November, 2001

EPA's Reports on the Environment 03 and 07



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Background

- ROE07 evolved from the Draft ROE 2003
- Changes in ROE07 based on feedback on the Draft ROE from SAB and stakeholders.
- Significant Changes
 - Indicators
 - Indicator definition and criteria
 - Questions restructured
 - Scaling

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ROE and EPA Strategic Planning

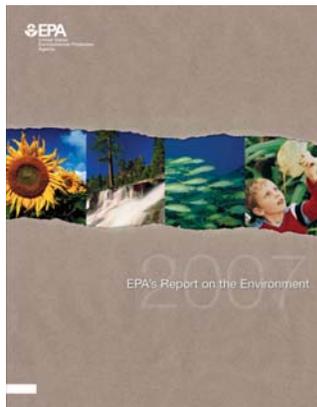
ROE should:

- Complement EPA’s strategic planning efforts
- Identify important gaps in information that hinder our decisions about how to invest in the future.

» *Administrator Steve Johnson*

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EPA’s 2007 Report on the Environment



- Asks questions important to EPA’s mission (air, water, land, human health, and ecological condition)
- Answers questions with “what we know and don’t know”
 - Indicators
 - Gaps
 - Limitations

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Report Structure

Chapters:

- Air, Water, Land, Human Health, Ecological Condition

Questions:

- Introduction and scope
- Indicators – Text, Graphic, Metadata
- Discussion
 - Summary of what the indicators say about the question
 - Important gaps, limitations, and challenges

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Charge Questions

- Formulation and scope of the questions
- Appropriateness of indicators for answering the questions
- Presentation of gaps and limitations
- Regionalization of National Indicators
- Regional Indicators
- Overall quality of the Report

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What are the trends in.....and their effects on Human Health and Ecological Condition?

- Air
 - Outdoor Air
 - Indoor Air

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What are the trends in.....and their effects on Human Health and Ecological Condition?

- Water
 - Fresh Surface Water
 - Ground Water
 - Wetlands
 - Coastal Water
 - Drinking Water
 - Fish and Shellfish
 - Recreational Water

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What are the trends in.....and their effects on Human Health and Ecological Condition?

- Land
 - Land Cover
 - Land Use
 - Wastes
 - Chemicals
 - Contaminated land

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Human Health What are the trends in?.....

- Health Status in the U.S.
- Human Disease and Condition for Which Environmental Pollutants May be a Risk Factor
- Exposure to Common Environmental Pollutants

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Indicators

- Revised indicator definition and developed indicator review criteria

“An indicator is a numerical value derived from actual measurements of a pressure, state or ambient condition, exposure, or human health or ecological condition over a specified geographic domain, whose trends over time represent or draw attention to underlying trends in the condition of the environment.”

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Ecological Condition What are the trends in?.....

- Extent and Distribution of Ecological Systems
- Diversity and Biological Balance
- Ecological Processes
- Critical Physical and Chemical Attributes
- Exposure to Pollutants

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Scaling

- ROE07 presents
 - 25 national ROE indicators scaled down by EPA Region
 - 10 national ROE indicators scaled down by other “regions”
 - 9 Regional “Pilot” indicators that provide important trends for all or part of an EPA Region.

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Indicator Changes

- New indicators:
 - Air toxics emissions, wadeable streams, contaminated lands, exposures to pesticides and other chemicals from foods and other pathways, and bird and fish populations.
- New indicators relevant to climate change:
 - Greenhouse gas emissions
 - Greenhouse gas concentrations
 - Air temperature and precipitation
 - Sea surface temperatures
 - Coastal sea level

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The Report on the Environment and Strategic Planning



- EPA Strategic Plan
 - Sets the Agency's goals, objectives, and strategic targets.
- EPA Annual Performance Report
 - Reports on achievement of goals, objectives, and strategic targets.

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How can the ROE inform strategic thinking and planning at EPA?

- Strategic Planning Pilot study underway
- Possibilities:
 - Is the ROE asking the right questions?
 - Revise, add or replace indicators?
 - Revise, add, or replace performance measures?

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ROE07 Next Steps

- SAB Review (July 2007)
- Indicator research and development
 - Better quantify uncertainty
 - Better ways to regionalize and scale indicators
 - Sensitivity of indicator to management actions
- ROE and strategic planning
- e-ROE and Highlights Document
- Next ROE in 2010 or 2011, but with more frequent electronic indicator updates