

EPA Tools & Resources Training Webinar: Report on the Environment (ROE)

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Meet the ORD ROE Team



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What you'll learn today

- What is the ROE? What is its origin? How has it evolved?
- How can I easily access and navigate this online resource?
- How can I use the ROE indicators and information in my work?

We will have time at the end for questions and discussion.

www.epa.gov/roe





EPA's Report on the Environment Program

The ROE Program provides environmental policy decision makers and others with scientifically defensible, up-to-date, objective, and relevant indicators and indicator-based *products* that are of *national importance* for protecting human health and the environment.

Report Trends

- Status and trends of the environment and human health represented by 80+ indicators

Develop Indicators

- Develop indicators on important issues to EPA

Inform EPA Priorities

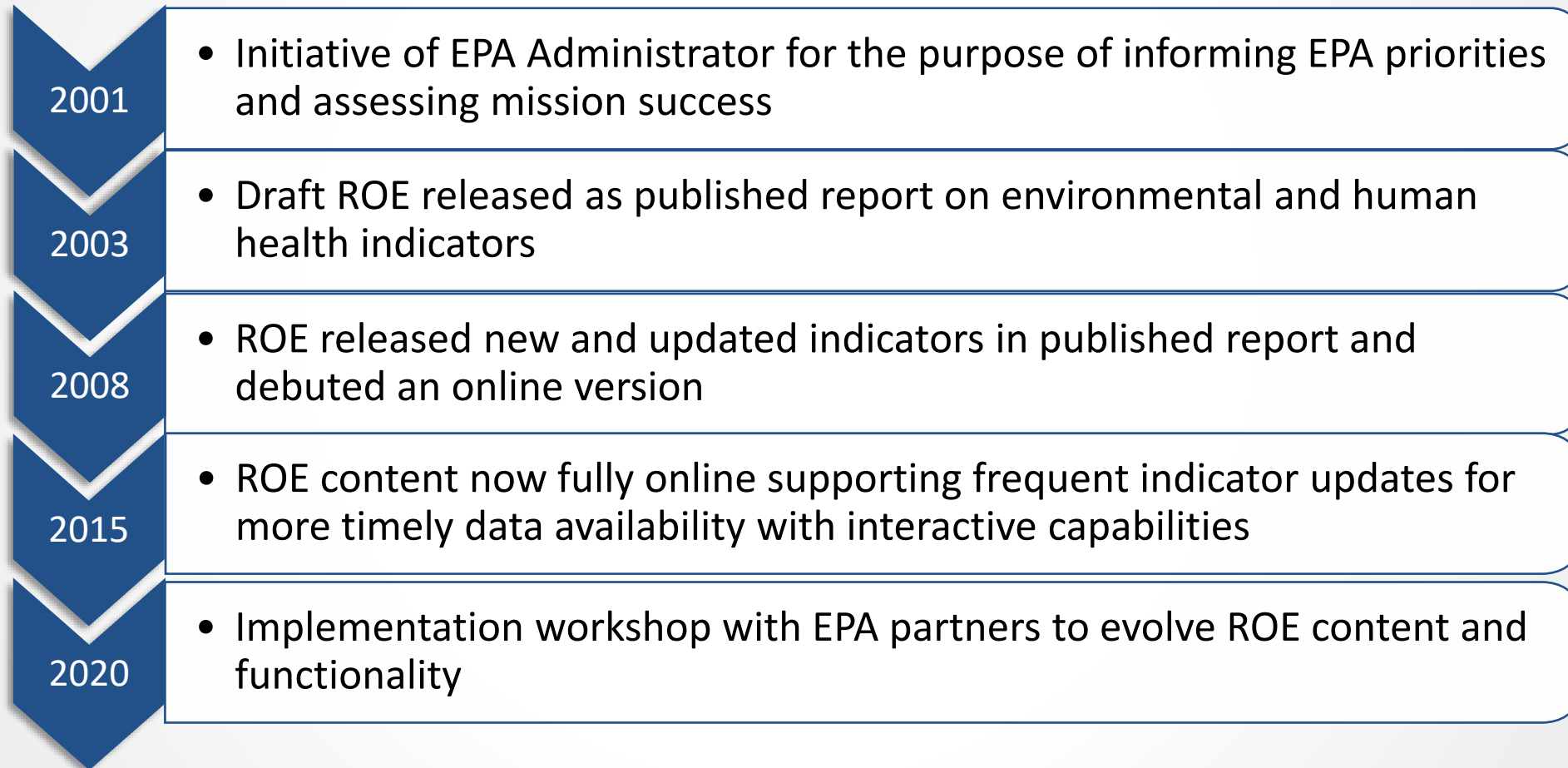
- Inform development of Agency activities and priorities

Communicate with Public

- Communicate the state of the nation's environment in an accessible way to the general public



ROE: A Brief History



ROE indicators:

numerical values derived from actual measurements of a pressure, state or ambient condition, exposure, or **human health or ecological condition**, over a **specified geographic domain**, whose **changes over time** represent or draw attention to underlying trends in the condition of the environment or human health





ROE Indicator Criteria

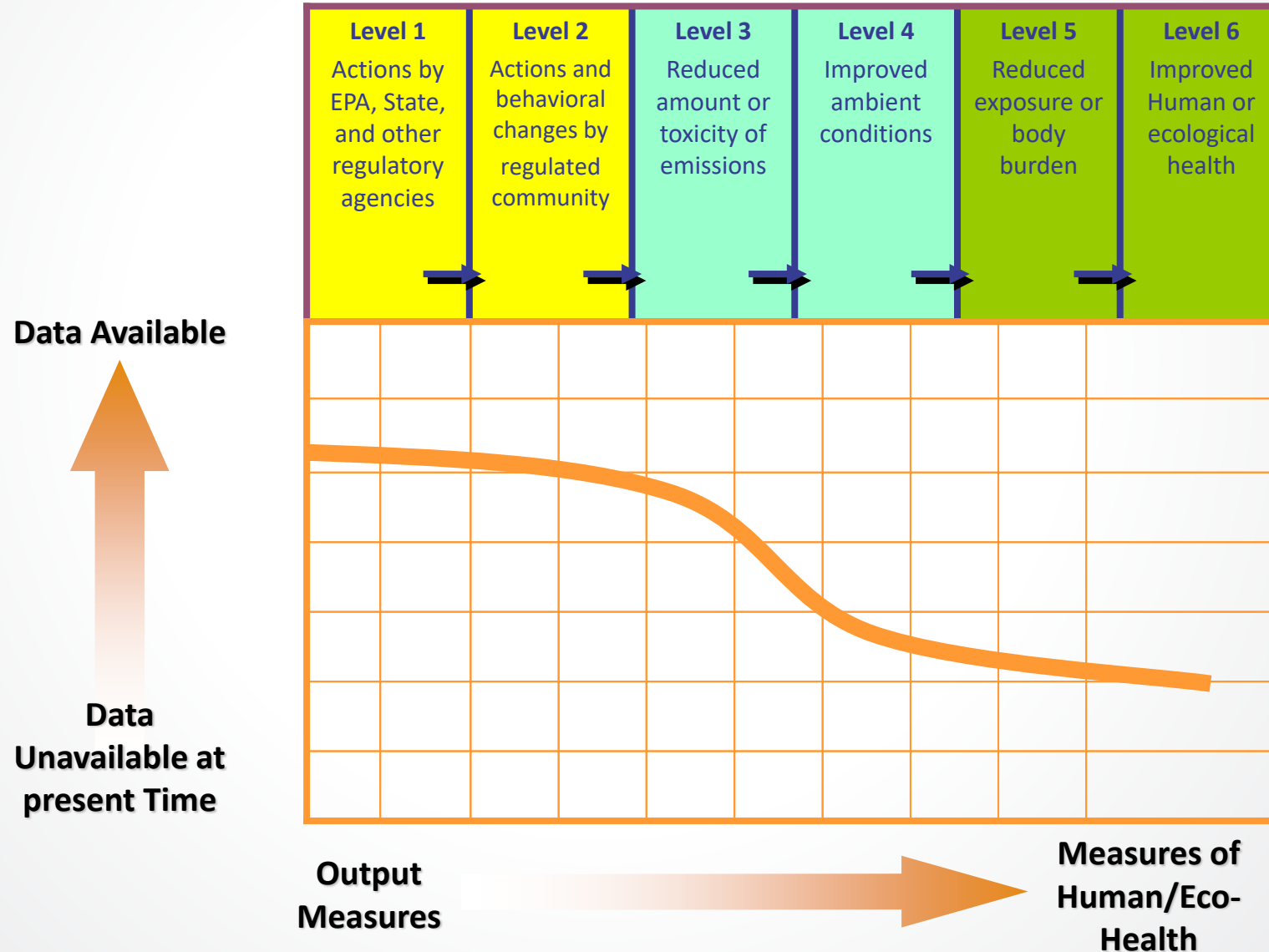
ROE indicators are

- **Useful, Objective, Transparent and Reproducible**
- **Vetted through internal and external scientific peer review**
- **Supported by vetted and validated data (provisional and forecast data are not presented)**

The underlying data are

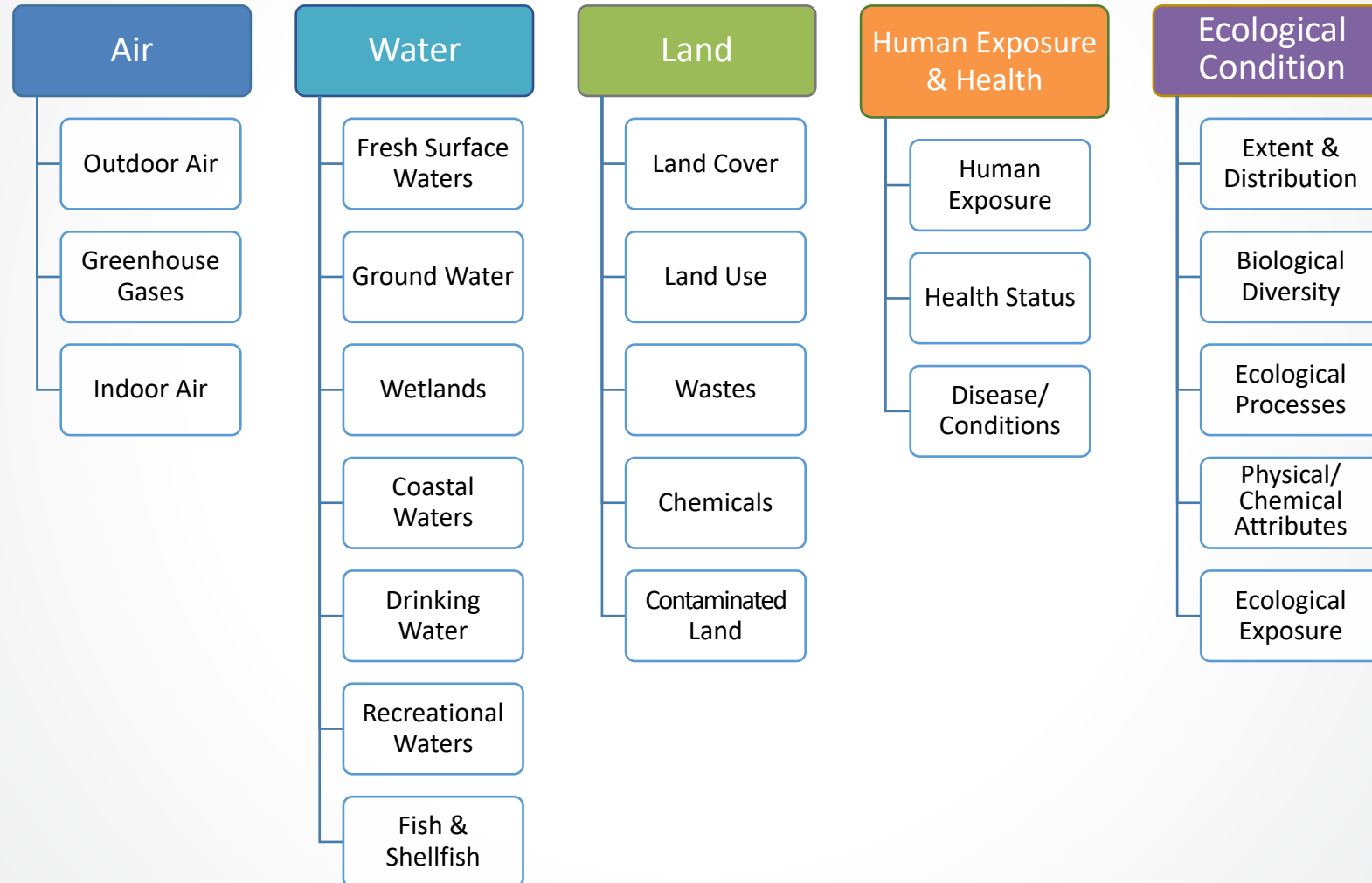
- **Characterized by sound collection, management, and quality assurance (QA) procedures**
- **Timely and describe changes or trends**
- **Comparable across time and space**
- **Representative of the target population**

Hierarchy of Indicators



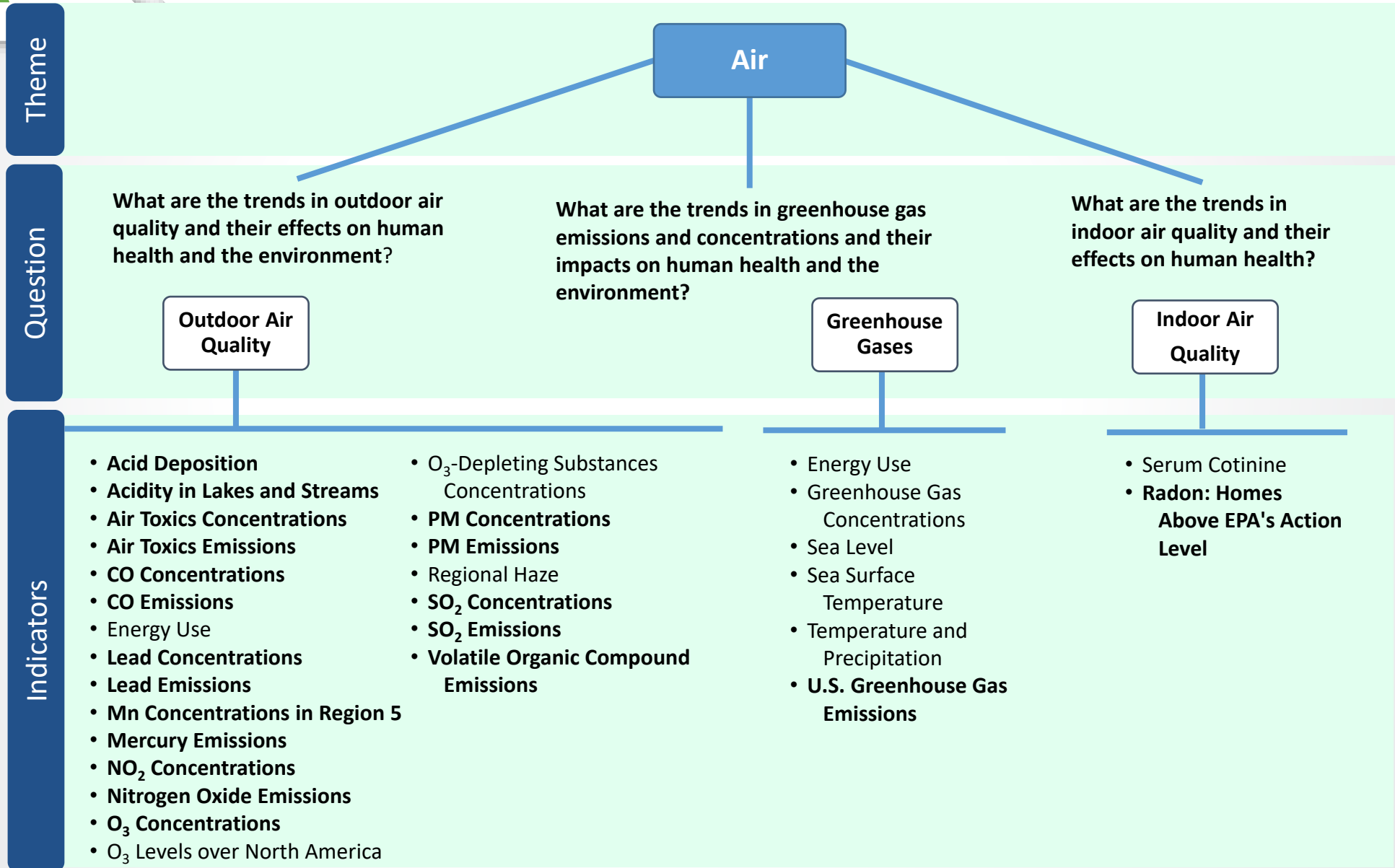


ROE Structure



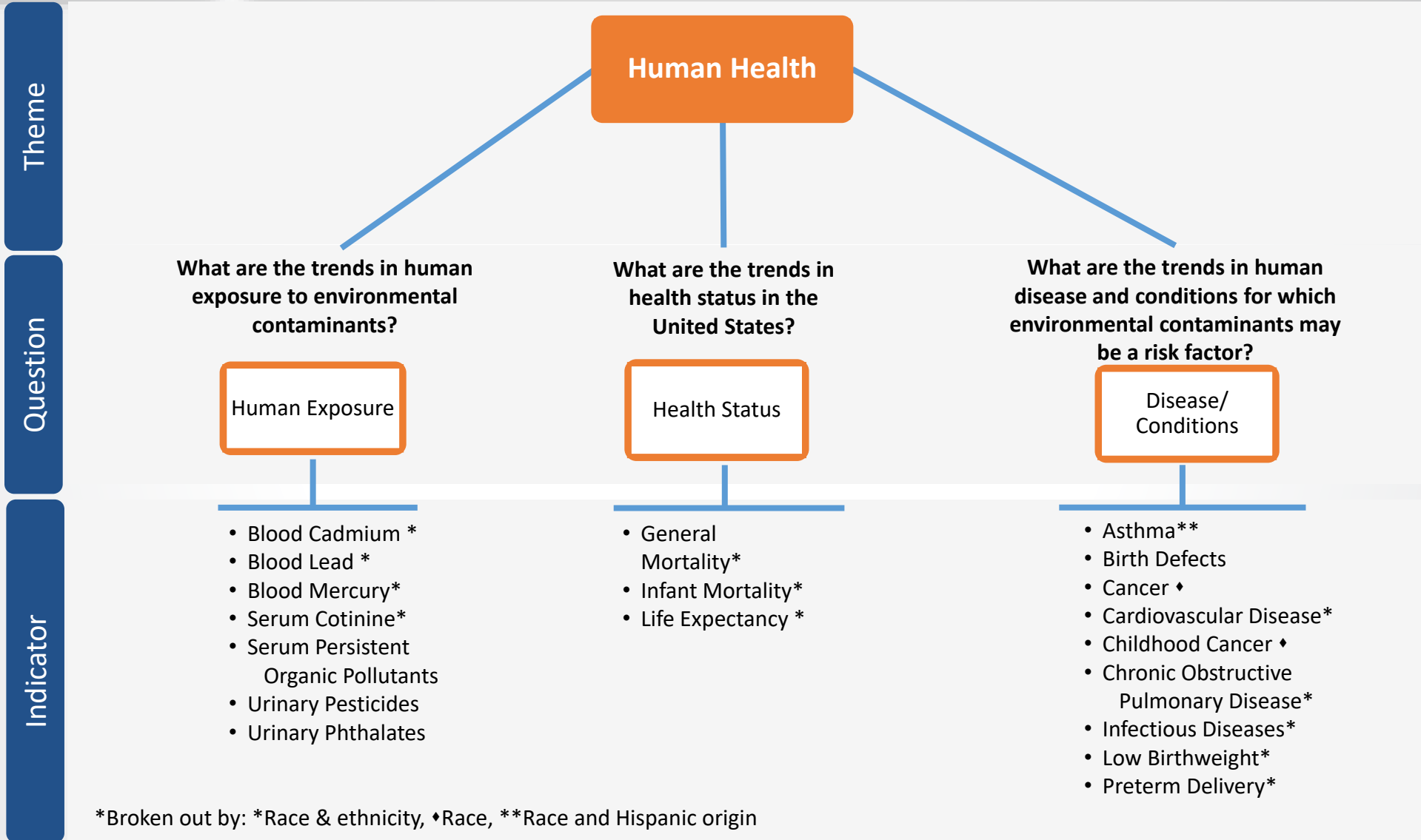
80+ indicators respond to questions and show observed trends

ROE Structure: Air





ROE Structure: Human Exposure & Health



ROE Indicators with sub-national breakdown

Breakdown by EPA Region

Air Toxics Emissions
Carbon Monoxide Concentrations,
Carbon Monoxide Emissions,
Nitrogen Dioxide Concentrations
Nitrogen Oxides Emissions
Ozone Concentrations
Particulate Matter Concentrations
Particulate Matter Emissions
Sulfur Dioxide Concentrations
Sulfur Dioxide Emissions
Volatile Organic Compounds Emissions
Cardiovascular Disease
Chronic Obstructive Pulmonary Disease
Agricultural Fertilizer
Drinking Water
Forest Extent and Type
Forest Fragmentation
Land Cover
Land Use
Urbanization and Population Change

5 area-specific indicators

Nitrogen and Phosphorus in Large Rivers
Hypoxia in Gulf of Mexico and Long Island Sound
Submerged Aquatic Vegetation in the Chesapeake Bay
Ambient Concentrations of Manganese Compounds in
EPA Region 5
Non-Indigenous Benthic Species in the Estuaries of the
Pacific Northwest

Other sub-national boundaries

Acid Deposition
Acidity in Lakes and Streams
Benthic Macroinvertebrates in Wadeable Streams
Coastal Benthic Communities
Coastal Fish Tissue
Coastal Sediment Quality
Cyanobacteria in Lakes
Trophic State of Coastal Waters
Forest Extent and Type
Regional Haze

Indicators with interactive mapping- explore/zoom to regional, state, county level

Acid Deposition
Acidity in Lakes and Streams
Carbon Storage in Forests
Radon: Homes above EPA's Action Level
Hypoxia in Gulf of Mexico and Long Island Sound
Land Cover
Ecological Connectivity
Fish Faunal Intactness
Temperature and Precipitation
Sea Level

EPA's Report on the Environment (ROE)

What is an ROE Indicator?

EPA's Report on the Environment (ROE) indicators are simple measures that track the state of the environment and human health over time. [Learn about ROE indicators](#)



Air



- [Air in the ROE](#)
 - [Outdoor Air Quality](#)
 - [Greenhouse Gases](#)
 - [Indoor Air Quality](#)

Water



- [Water in the ROE](#)
 - [Fresh Surface Waters](#)
 - [Ground Water](#)
 - [Wetlands](#)
 - [Coastal Waters](#)
 - [Drinking Water](#)
 - [Recreational Water](#)
 - [Consumable Fish and Shellfish](#)

Land



- [Land in the ROE](#)
 - [Land Cover](#)
 - [Land Use](#)
 - [Chemicals Used on Land](#)
 - [Wastes](#)
 - [Contaminated Lands](#)

What's New?

- Find and [explore the ROE indicators](#)
- Check out the [most recently updated indicators](#)
- [Sign up](#) to receive ROE email updates

Human Exposure & Health



- [Human Exposure & Health in the ROE](#)
 - [Exposure to Environmental Contaminants](#)
 - [Health Status](#)
 - [Disease and Conditions](#)

Ecological Condition



- [Ecological Condition in the ROE](#)
 - [Extent and Distribution](#)
 - [Diversity and Biological Balance](#)
 - [Ecological Processes](#)
 - [Physical and Chemical Attributes](#)
 - [Ecological Exposure to Contaminants](#)

Learn about the ROE Program



- [About the ROE](#)
- [Frequent Questions](#)
- [History of the ROE](#)
- [ROE Program Publications and Activities](#)
- [Sustainability and the ROE](#)

Search the ROE

Search input field with a search button





User Resources

- [Glossary](#)
- [Guide to the ROE](#)
- [What You Can Do](#)

Multiple ways to access the indicators from the ROE Home Page

- Click on the Theme picture and access from the main theme page
- Click on the Theme title bullet and access from the theme page
- Click on the Theme-specific topical questions and access from the question pages
- Click through the rotating banner (2nd frame)
- Click on the links in the "What's New?" box

Report on the Environment

CONTACT US SHARE    

- [ROE Home](#)
- [About the ROE](#)
- [Guide to the ROE](#)
- [Air](#)
- [Water](#)
- [Land](#)
- [Human Exposure and Health](#)
- [Ecological Condition](#)
- [Explore ROE Indicators](#)
- [Advanced ROE Search](#)
- [Frequent Questions](#)
- [Sustainability and the ROE](#)
- [History of the ROE](#)
- [What You Can Do](#)
- [Glossary](#)

Explore ROE Indicators

The 80+ ROE indicators help answer [23 questions](#) in five theme areas critical to EPA's mission. Use the indicator table below to learn about and navigate to any ROE indicator. You can filter the list by theme or topic area using the checkboxes, search for an indicator by name, or sort and browse the indicators by clicking the arrows in the top row of the table.

[Select all](#) | [Deselect all](#)

- Air**
 - Outdoor Air Quality
 - Greenhouse Gases
 - Indoor Air Quality
- Water**
 - Fresh Surface Waters
 - Ground Water
 - Wetlands
 - Coastal Waters
 - Drinking Water
 - Recreational Waters
 - Consumable Fish and Shellfish
- Land**
 - Land Cover
 - Land Use
 - Chemicals Used on Land
 - Wastes
 - Contaminated Land
- Human Exposure and Health**
 - Exposure to Environmental Contaminants
 - Health Status
 - Disease and Conditions
- Ecological Condition**
 - Extent and Distribution
 - Diversity and Biological Balance
 - Ecological Processes
 - Physical and Chemical Attributes
 - Ecological Exposure to Contaminants

Show **All** entries Search by indicator name:

Indicator	Years of data	Theme area(s) (in bold) and associated topics	Last update
Air Toxics Concentrations	2003 - 2020	Air ; Outdoor Air Quality	07/2023
Benthic Macroinvertebrates in Rivers and Streams	2008 - 2014	Water ; Fresh Surface Waters Ecological Condition ; Diversity and Biological Balance	07/2023
Birth Defects	1999 - 2020	Human Exposure and Health ; Disease and Conditions	07/2023
Blood Cadmium	1999 - 2018	Human Exposure and Health ; Exposure to Environmental Contaminants	07/2023





ROE Website demonstration

www.epa.gov/roe

www.epa.gov/report-environment



How can I use ROE indicators and information in my work?

- A **one-stop shop** for busy people—only resource in the US that provides national status & trends across multiple themes and media
- **Browse indicators** to learn about US environment and human health condition, both current status and historical trends—a **refresher before meetings** with senior managers
- Find **indicators that relate to your work and interests** and break out of the silo to **expand your interest horizon**
- National level indicators **provide examples** for what might be useful **for local level reporting**



How can I use ROE indicators and information in my work?

- Can **inform data availability for different spatial scales**
- **Provide a baseline or reference levels** for local comparisons or if more local indicators not available
- **Download graphics** and use them **for reports and presentations**
- Not just indicators—**abundance of contextual information** as well as **links to other EPA and external websites and reports**

- Expanding “Explore the Indicators” table to include every indicator exhibit (>250)
- Indicator Trends
 - Adding component to identify at-a-glance long-term trend tendencies
 - Simple symbols with corresponding text (e.g., getting better or worse, neutral or mixed picture)



- High-level key story
 - Both will appear in the table and at the top of each indicator page
- Cross-media stories
 - Designed to show interconnections between indicators through high-level stories of environmental problems and issues



Contacts

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