

# Essential Elements of the EPA Global Change Research Program

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## **Assessment of Consequences**

- Assess the potential consequences of global change for human health, ecosystems, and social well-being in the U.S.

## **Science for decision making**

- Provide scientific information to support decision making by policy makers, resource managers, and other stakeholders.

## **Independent & Interactive Effects of Multiple Stressors**

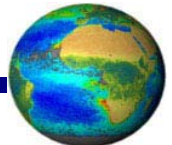
- Variability in climate (*e.g.*, El Nino, droughts, floods)
- Climate change
- Land-use change
- UV radiation

## **Adaptation Strategies**

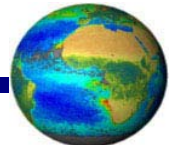
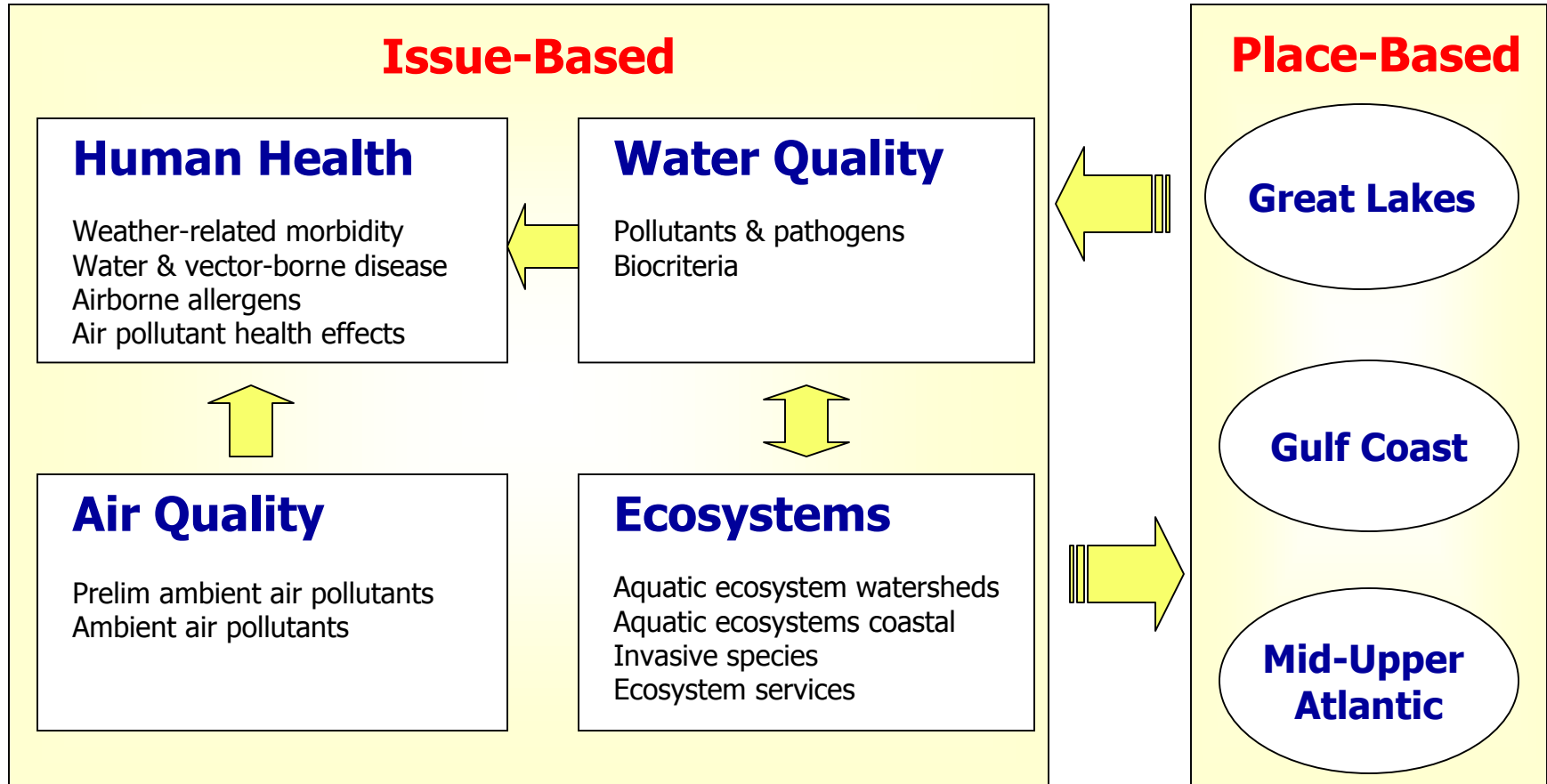
- Focus on adaptation – building resilience to global change, while responding to both risks and opportunities.

## **Human Dimensions**

- Examine how humans contribute to global change and respond to its consequences.

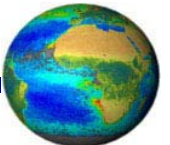


# The Ten Year Plan for EPA GCRP



# **Examples of climate needed at regional scales**

- Extremes
  - Heat, cold, unusual rainfall
- Flooding, droughts
- Ice
  - Ice on snow, rain on snow, rain on ice
- Atmospheric (3-dimensional) variables
- Precipitation: hourly/daily/seasonal
- Temperature: hourly/daily/seasonal
- Solar radiation
- Wind
- Soil Moisture



## **Other “regional” scenarios needed**

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- Economic growth
- Population growth and demographics
- Land use change
- Technology
- Environmental Factors
- Institutional/Legal

