

The State of The Nation's Ecosystems 2008

Measuring the Lands,
Waters, and Living Resources
of the United States

THE H. JOHN HEINZ III CENTER FOR
SCIENCE, ECONOMICS AND THE ENVIRONMENT

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Data and Information: Lessons Learned *The State of the Nation's Ecosystems Project*

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State of the Nation's Ecosystems

- **Concept emerged from Clinton White House**
- **Identify strategic indicators of condition and use of U.S. ecosystems**
- **Lay the groundwork for periodic, high-quality, non-partisan reporting**

Since 1997

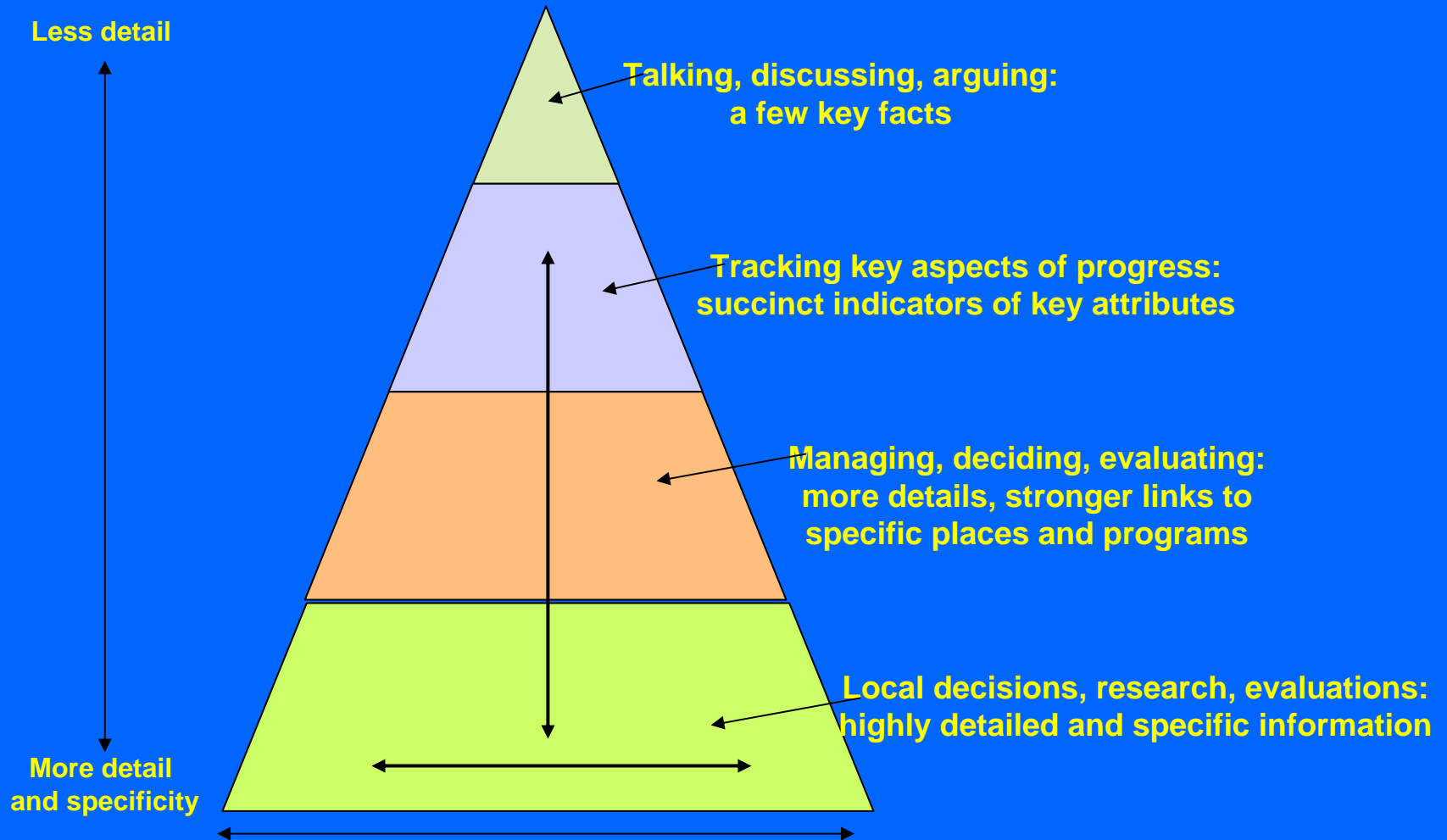
- **State of the Nation's Ecosystems Report, 2002, 2008**
- **Data Gaps Report**
- **Report on Landscape Indicators**
- **Roadmap Policy Document**

State of the Nation's Ecosystems:

Indicator design and presentation

- **Focus on what is “important” and “relevant” to the user**

Information and Indicators for Multiple Needs Thinking About What's Needed and Where



State of the Nation's Ecosystems:

Indicator design and presentation

- **Stakeholder involvement is important**
- **Normative judgments can alienate stakeholders**
- **Keep it simple**

State of the Nation's Ecosystems

Data Lessons

- **Great deal of data collected on ecosystem condition and use (US EPA, NASA, USDA, US Dept. of Commerce, US Dept. of Interior, NatureServe, and others)**
- **Still many data gaps**

Data Gaps

- **Of the 108 indicators in 2008 *State of the Nation's Ecosystems Report***

32 indicators had partial data

28 indicators had insufficient data

12 indicators were undefined

- **Gaps due to lack of monitoring, varying methods, spatial and temporal sampling, indicator development needs**

Data Gap: Non-Native species

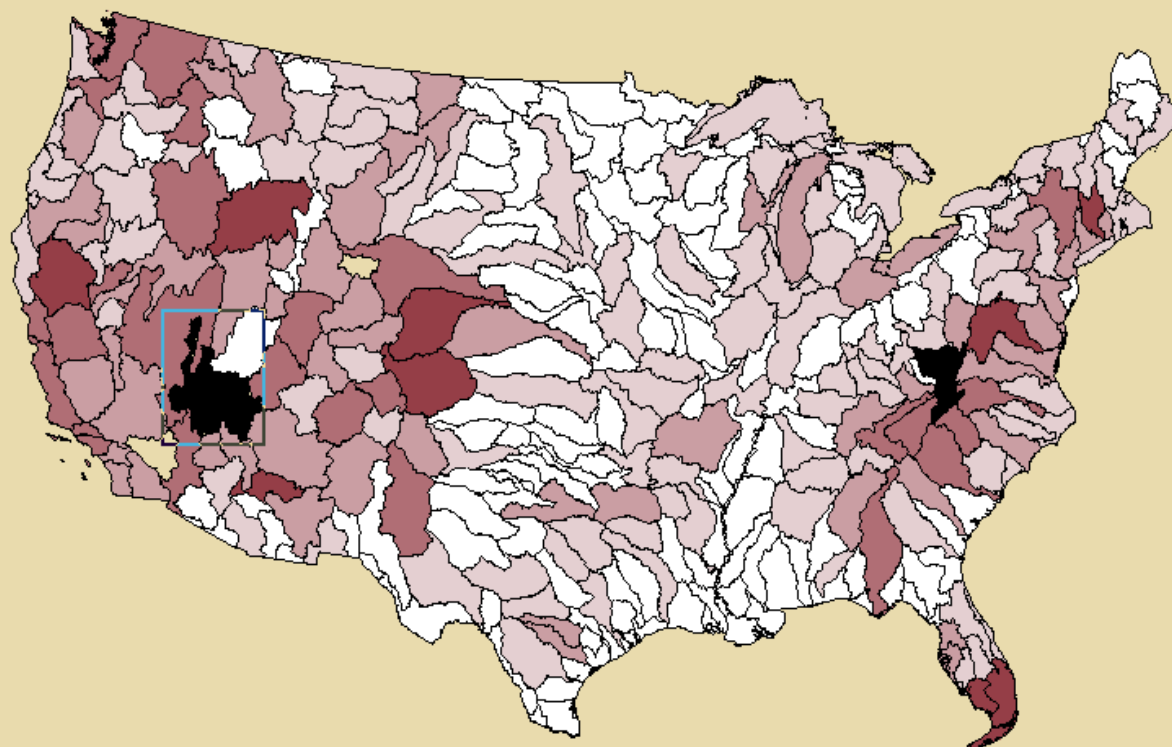
Data on fish species

Data not adequate for reporting on :

- Plants
- Other vertebrates
- Invertebrates
- Parasites
- Pathogens
- Rate of establishment

Established Non-native Species, 2007

Partial Indicator: Fish Species in U.S. Watersheds



Number of Established Species

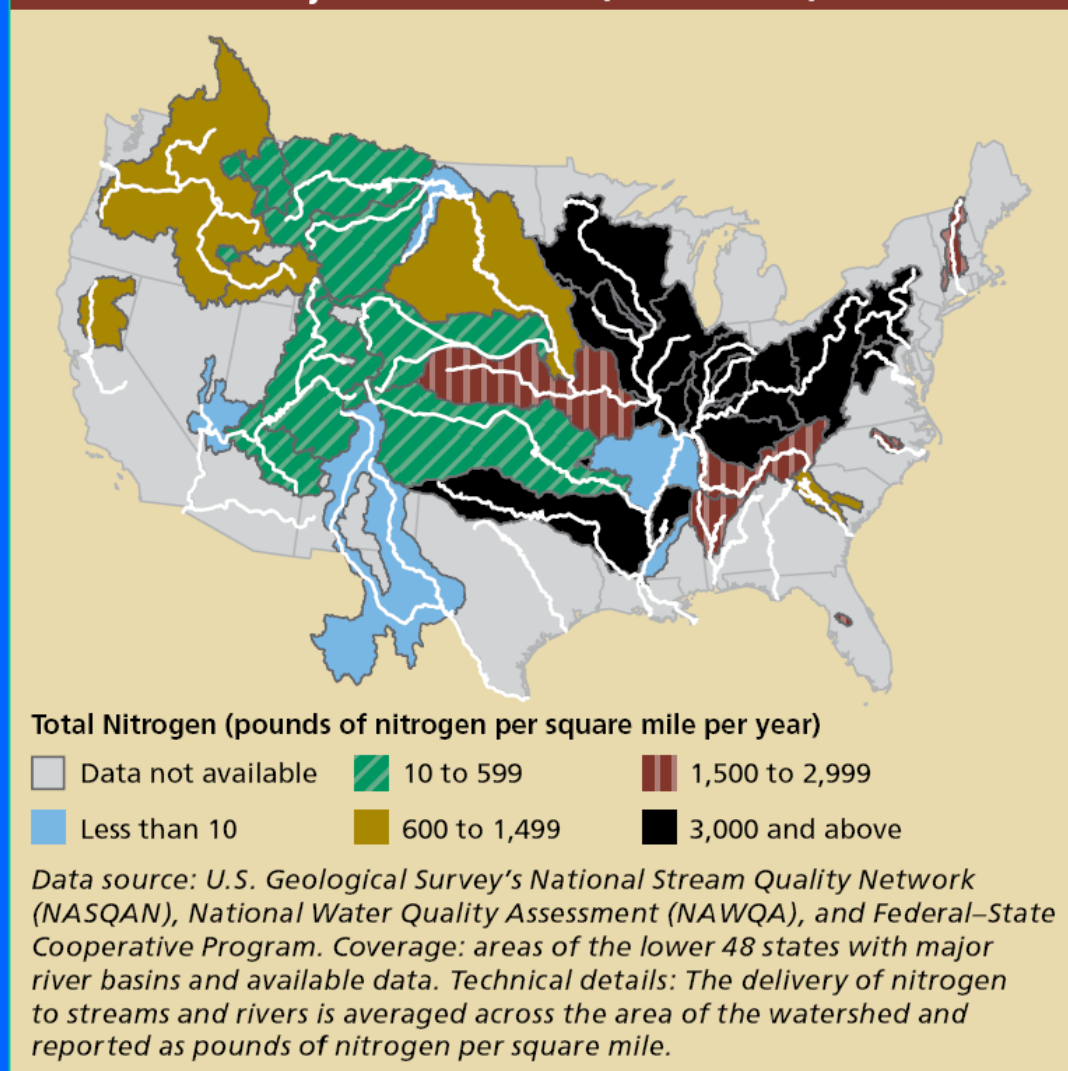
□ 1-10 □ 11-20 □ 21-30 □ 31-40 □ 41-50 ■ 51-60

Data source: U.S. Geological Survey. Coverage: lower 48 states.

Delivery of Nitrogen – a partial picture

- NAWQA study units – representative but limited spatial coverage
- EPA Wadeable Streams Assessment geographically robust but limited temporal coverage

Delivery of Total Nitrogen to Streams and Rivers from Major Watersheds (2001–2005)



Observations about “the system”

- **Not truly a *system* – set of independent parts**
- **No consistent use of metrics**
- **No “central nervous system”**
- **Insufficient resources**

Looking forward

- **Increased systematic integration of data**
- **Analysis of information/tools needed to respond to climate change**



Thank you

www.heinzcenter.org/ecosystems

