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Exercises in Framework Selection: Lessons Learned

ENVIRONMENTAL SUSTAINABLE INDEX AND ENVIRONMENTAL PERFORMANCE INDEX

Design Criteria: What does the framework support?

- **Describe**
  - Reduce complexity in policy-relevant ways
  - Not necessarily tied to any policy target
  - Answer the question "What's happening"?

- **Describe**

- **Diagnose**
  - Indicators make it possible to explore relationships between different phenomena, to explore competing trends, and to dig into anomalies

Subject	Grade
Math	F
Language Arts	A+
Social Studies	A+
History	A+

Indicators serve multiple purposes

- **Describe**
- **Diagnose**
- **Deliberate**
  - Indicators help societies and decision-makers engage in dialogue about what kind of future they want to have.
  - They help ground discussion in empirical reality.
  - They set up goal posts whose desired positions can be debated.

Subject	Grade
Math	B
Language Arts	B
Social Studies	B
History	B

Indicators serve multiple purposes

- Describe

- Diagnose

- Deliberate

- Drive Action
  - When you know where you want to go, indicators can help you navigate there
  - Hold decision-makers accountable
  - Reward progress and punish inaction

Indicators serve multiple purposes

- Describe
- Diagnose
- Deliberate
- Drive Action
- **Discover** patterns you didn't know were there
  - Who are the leaders and laggards?
  - What are the best and worst practices?

C- Average

B+ Average

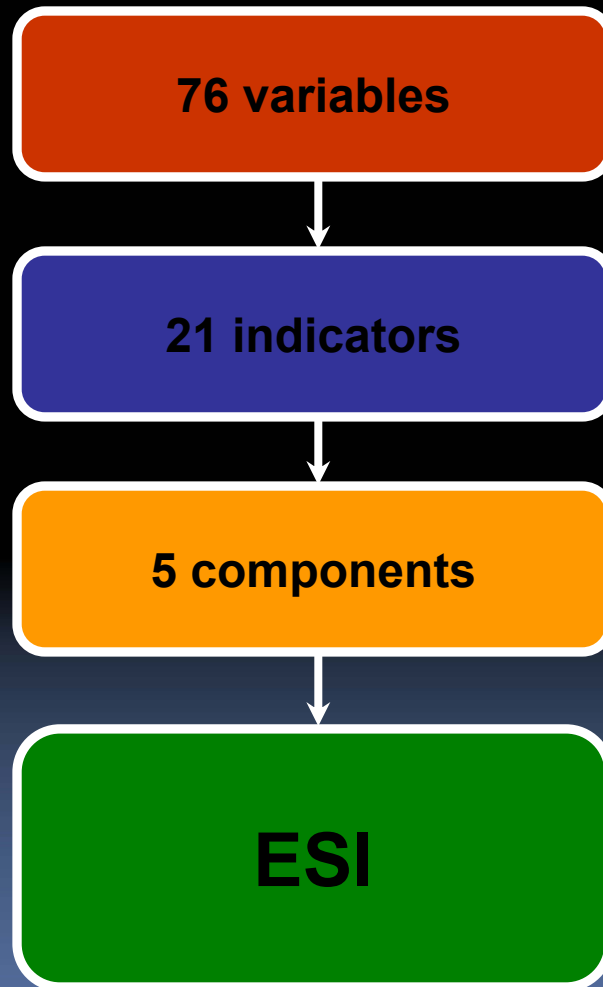# Environmental Sustainability Index (ESI)

- Partners
  - World Economic Forum
  - Yale University Center for Environmental Law and Policy
  - Columbia University Center for International Earth Science Information Network (CIESIN)
  - Joint Research Center, European Commission
- Pilot ESI January 2000
- 2001 ESI
- 2002 ESI
- 2005 ESI

What ESI tries to measure

Measures relative prospects for long-term environmental sustainability

Constructing the ESI

76 variables → 21 indicators → 5 components → ESI

Measures relative prospects for long-term environmental sustainability

5 Core Components

- 20 Indicators

Environmental Systems

- Air Quality
- Water Quantity
- Water Quality
- Biodiversity
- Terrestrial Systems

Environmental Stresses

- Reducing Air Pollution
- Reducing Water Stress
- Reducing Ecosystem Stress
- Reducing Waste and Consumption Pressures
- Reducing Population Stress

Human Vulnerability

- Basic Sustenance
- Environmental Health

Social and Institutional Capacity

- Science/Technology
- Capacity for Debate
- Environmental Governance
- Eco-Efficiency
- Private Sector Responsiveness

Global Stewardship

- Participation in International Collaborative Efforts
- Greenhouse Gas Emissions
- Reducing Transboundary Environmental Pressures

Strengths and weaknesses of ESI framework

- Draws heavily on DPSIR framework
- Flexible enough to cover all important phenomena

- Poor match to available data
- Suspicion over "capacity"
- "Stewardship" seems like a residual
- Discomfort over measures that are weakly connected to performance
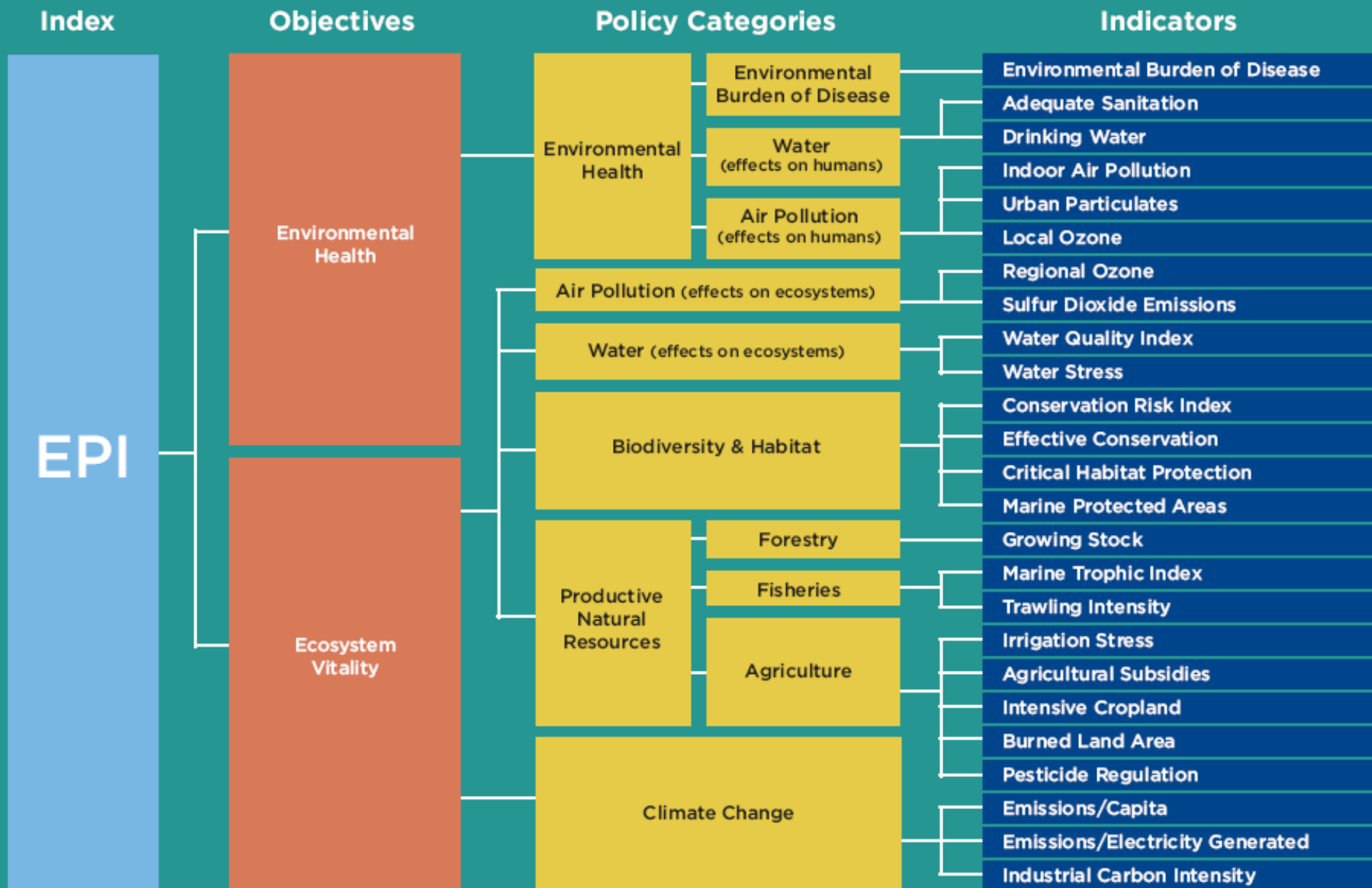- Draws heavily on DPSIR framework

Environmental Performance Index

- Pilot EPI 2006

- EPI 2008

- EPI 2010 (in preparation)

Measures relative success at achieving environmental targets

Environmental Performance Index Framework

Strengths and weaknesses of EPI

- Tighter connection to decision-making processes – more relevant

- Analytical approach easier to grasp than ESI

- Travels well across scales

- Human – ecosystem division

- Does not require DPSIR coherence

- Salient targets emerge with significant lags

- Targets are unstable

- Targets are both spotlights and blinders

- Transnational and global phenomena challenging to fit into national performance framework

- Human – ecosystem division

- Does not require DPSIR coherence

Lessons Learned

- No single framework does well at all design criteria

- All data streams serve multiple purposes, but few are organized to do so effectively

- We probably need a family of nested/linked frameworks

- We need to think of frameworks in terms of data systems, not data tables.