

“Ways and Means to Improve Availability, Accessibility, and Effectiveness of Information: Gaps & Needs” – An Information Provider Perspective

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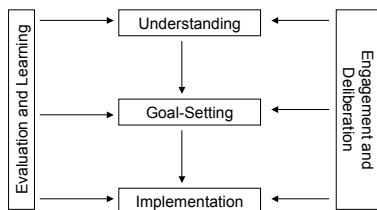


Improving Accessibility & Effectiveness of Information

- Utility of indicators
- Novel web mapping technologies
- Decision makers need to act on data that are already available



Indicators in Context



Useful Indicators can improve ability to

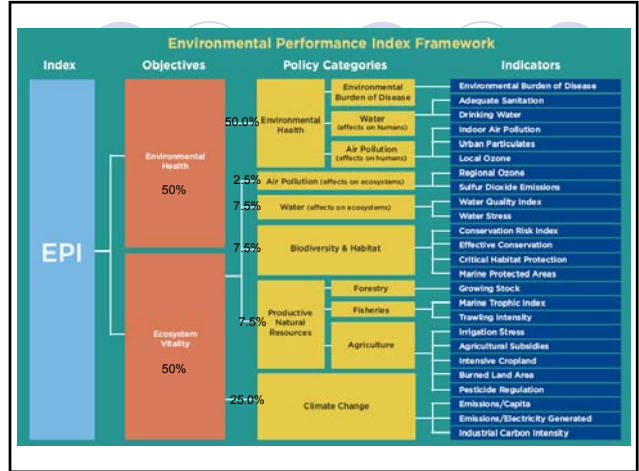
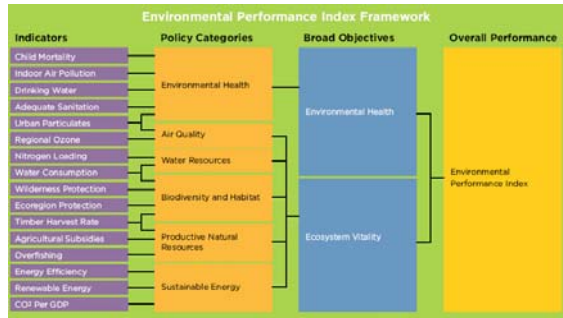
- **Describe** problems accurately and saliently
- **Diagnose** the causes of these problems
- **Design** solutions commensurate with description and diagnosis
- **Drive** action with ongoing monitoring and evaluation

2006 and 2008 Environmental Performance Index

- Focus on **measurable outcomes** in six core policy areas for 133 and 149 countries, respectively
- Employ a **proximity-to-target** approach
- Targets are identified through **international consensus** or expert opinion
- Seek to answer the question: **How close** is a country to globally agreed upon **environmental policy objectives**?

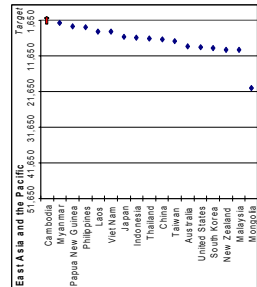


EPI Framework

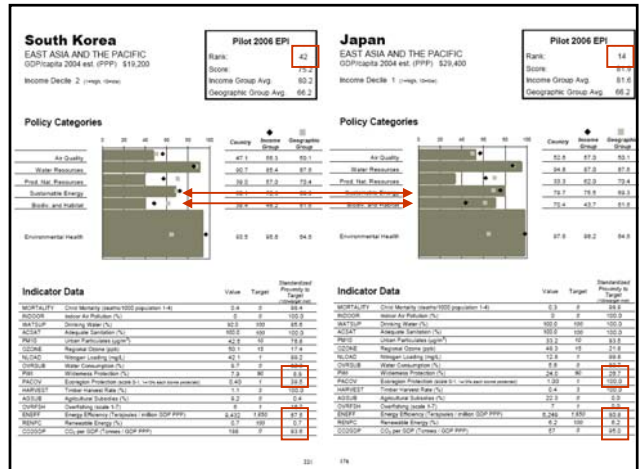
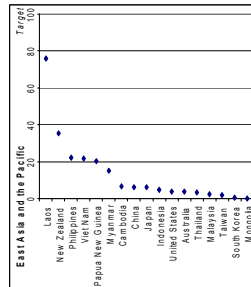


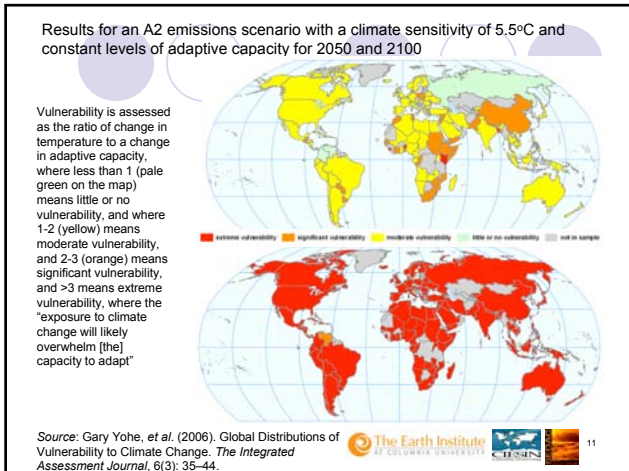
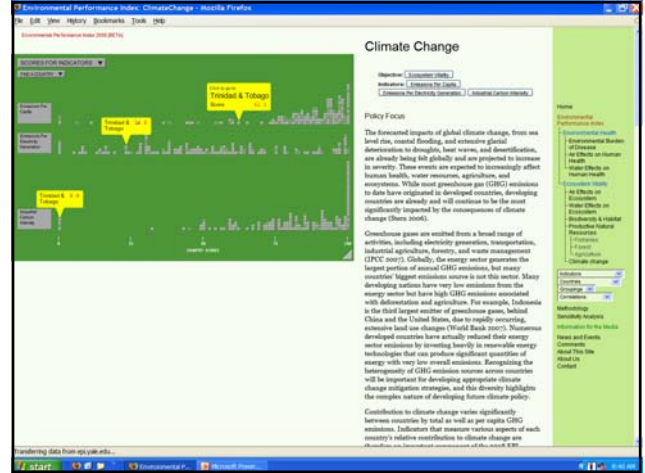
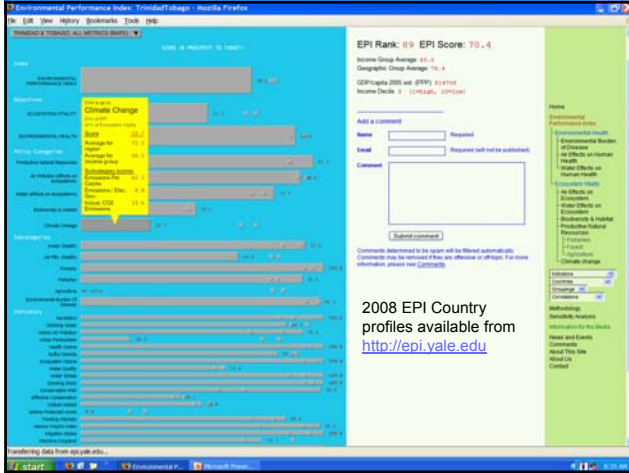
Sustainable Energy

Energy Efficiency
Target: 1,650 TJ per Million \$ GDP



Renewable Energy
Target: 100%





Novel ways to communicate info

- Body temperature example
- That old projection methods for planning infrastructure need to be re-evaluated

The Earth Institute
AT COLUMBIA UNIVERSITY

Data accessibility via web mapping

Has enormous potential, though still remains largely the province of "techies"

Global Data via Web Mapping Services and Google Earth



- GPW served via WMS
- Simple KML file to provide access to data

Assessing Caribou & Permafrost

- Caribou sightings during the calving season (from CARMA via Cubewerx WMS)
- Permafrost Extent from Arctic Climate Impact Assessment

GEOSS Demo at GSDI-9, Chile: Effect of drought on poverty

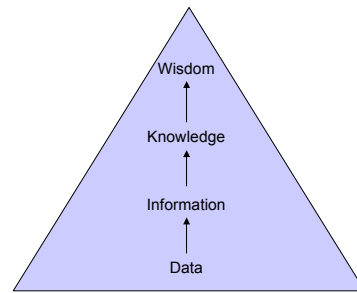
Data/policy analyst monitoring populations that may be at risk from drought

Developed by Greg Yetman, CIESIN, Columbia University

Group on Earth Observations (GEO) and its Global Earth Observation System of Systems (GEOSS)



The ideal: "Data for decision-making"



The reality

"The international agencies that are leading the discussions on how to support adaptation to climate change do not understand the political and institutional constraints on successful local adaptation." – Satterthwaite *et al.* 2007 "Adapting to climate change in urban areas." London: IIED.

"Climate change and adaptation are not on the priority policy agenda of this new ministry [of Spatial Planning and Land Management]. ... In 2005 the IADB financed the write up of the terms of reference for a coastal zone management plan. The write up is not used and seems to have vanished into a drawer somewhere. There is a large discrepancy and disconnect between the intent of the [UNFCCC] that has been ratified by the government of Suriname and the actual practice of preparing for the negative impacts of climate change on this country." – Maureen Silos. 2008. "Politics, Climate and Suriname." *Tiempo* #66.

Realism, not cynicism

1. Data and information alone will not solve the problem – info is often available but not acted upon.
2. Truly democratic, people centered develop plans that improve people's lives and livelihoods will increase people's resilience to climate change and other shocks.
3. Business as usual development interventions will do little to increase adaptive capacity or resilience to climate change.
4. Corrupt or unaccountable governments are unlikely to do more than pay lip service to climate change.

Improving Availability of Information: Gaps and Needs

- There are a plethora of government-collected data that could be exploited
- There are an increasing number of global or regional scale climate, land cover, and other biophysical data sets
- There is a need to *analyze* the existing data
- For this it may be necessary to build policy research capacity
- Information management systems to support adaptation

Additional Gaps & Needs

- Could improve vital registration data (births, deaths, marriages)
- Could improve health statistics
- Better tracking of migration flows
- Could “spatialize” more of the existing socioeconomic data for (a) visualization of spatial patterns and (b) analysis
- Continue poverty mapping
- IAV community needs to create a framework which can represent their data/info needs to those outside this community

Data types listed by speakers day 1: Mostly dealing addressing human V&A

- Population dynamics (density, distribution, migration trends, urbanization, ethnicity)
 - Poverty data (or proxies such as housing quality or HH assets)
 - Health status (morbidity)
 - Life expectancy
 - Labor force participation rates
 - Employment
 - Income
 - Urban areas
- Agriculture
- Agricultural lands
 - Crop type
 - Crop yields
 - Economic return/ha
 - Market dependency & terms of trade
 - Dietary preferences and sources for those foods

Data & information needs for V&A assessment of other systems and sectors

- Health
- Air and water quality
 - Land cover/land use
 - Housing stock/housing standards
 - Infrastructure: Water supply, sanitation, communications, transport, dams
 - Hazards: Disaster preparedness, insurance
 - Communication: Radios, telephones, literacy
 - Socioeconomic: Income, poverty, livelihoods
 - Social: Family types, support networks
 - Behavioral: physical activity, clothing, siesta
 - Demographic: age structure, gender, ethnicity
 - Health status: HIV/AIDS, malnutrition, immunity
 - Health services: availability, accessibility, quality
 - Disease control
- Biodiversity
- Protected areas
 - Species distributions
 - Ecosystems (wetlands, mangroves, drylands, etc.)
- Fisheries
- Fishing fleet size
 - Fish breeding areas
 - Coral reefs, sea grasses
- Water resources
- River flows
 - Precipitation
 - Ground water (and sustainable use thereof)
 - Water holding capacity
 - Irrigated areas
 - Demand for domestic, industry, and agriculture (DIA)
 - Ecosystem service provision

AIACC Data, Methods and Systems Activity - Synthesis Page - Mozilla Firefox

Environmental Performance Summary - AIACC Data, Methods and Systems

AIACC Projects: Sectors, Systems, and Groups

ID	Code	Sector	System	Workshop
1	AF04	Ecosystems, Agriculture, Water Resources	Food Security, Biodiversity	Subsistence Farmers, Tourism Workers
2	AF07	Regional climate economics	Climate	Climate Information Services
3	AF14	Agriculture	Food Security	Subsistence Farmers, Rural Poor, Women
4	AF20	Regional climate economics	Climate	Climate Information Services
5	AF23	Agriculture	Food Security	Subsistence Farmers, Rural Poor
6	AF38	Agriculture, Forestry, Water Resources	Food Security, Land Use, Disasters	Subsistence Farmers, Rural Poor
7	AF42	Agriculture, Ecosystems, Water Resources	Food Security	Subsistence Farmers, Rural Poor
8	AF47	Agriculture	Regional Economy	Rural and Urban Poor
9	AF90	Agriculture, Water Resources	Food Security, Land Use	Subsistence Farmers, Commercial Farmers, Resource Managers
10	AF91	Health	Maternal and Child	Rural and Urban Poor
11	AF92	Agriculture, Water Resources	Food Security, Pastoral Systems, Sustainable Livelihoods	Rural Poor, Subsistence Farmers, Subsistence Fishermen
12	AD08	Agriculture, Ecosystems	Food Security, Pastoral Systems, Human Settlements	Subsistence Farmers, Rural Poor
13	AD07	Water Resources	Disasters	Resource Managers
14	AD12	Agriculture	Food Security, Land Use	Commercial Farmers
15	AD21	Forestry, Water Resources, Agriculture, Infrastructure	Land Use, Biodiversity, Human Settlements	Subsistence Farmers, Commercial Farmers, Resource Managers, Rural Poor
16	AD25	Agriculture, Water Resources, Infrastructure, Tourism	Food Security, Land Use, Regional Economy	Subsistence Farmers, Women, Resource Managers
17	LA06	Water Resources, Agriculture, Tourism	Disasters	Resource Managers
18	LA26	Sea Level Rise and Coasts	Climate	Climate Information Services
19	LA27	Agriculture, Water Resources	Food Security, Pastoral Systems	Commercial Farmers
20	LA29	Agriculture, Water Resources	Food Security, Sustainable Livelihoods	Subsistence Farmers
21	LA32	Sea Level Rise and Coasts, Ecosystems, Water Resources, Health	Biodiversity, Regional Economy	Subsistence Fishermen
22	SD05	Health, Tourism	Dengue Fever, Regional Economy	Rural and Urban Poor
23	SD09	Sea Level Rise and Coasts, Agriculture, Water Resources	Food Security, Human Settlements, Regional Economy	Rural and Urban Poor
24	SD30	Sea Level Rise and Coasts, Tourism, Ecosystems, Water Resources, Infrastructure	Regional Economy	Tourism Workers

AIACC DMS <http://sedac.ciesin.columbia.edu/aiacc/>

Data & information sources listed by speakers on day 1

- Census
- Demographic and health or multiple indicator cluster surveys
- Living standard surveys
- Labor force surveys
- Establishment surveys
- National accounts
- Key informants (communities, labor associations, etc.)
- Traditional knowledge systems & LEK
- Environmental monitoring programs
 - Satellite remote sensing
 - In situ monitoring of hydrology, biodiversity,