

**Restoring Nature's Capital:** 

An Action Agenda to Sustain Ecosystem Services Jonathan Lash



# RESTORING NATURE'S CAPITAL An Action Agenda to Sustain Ecosystem Services

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#### WITH

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WASHINGTON, DC

17 experts from around the globe contributed to the agenda



# Drawing down nature's capital

#### Degraded

#### Mixed

#### **Enhanced**

#### **Provisioning**

Capture fisheries
Wild foods
Wood fuel
Genetic resources
Biochemicals
Fresh water

Timber Fiber Crops Livestock Aquaculture

#### Regulating

Air quality regulation
Regional and local climate
regulation
Erosion regulation
Water purification
Pest regulation
Pollination
Natural hazard regulation

Water regulation (e.g., flood protection Disease regulation

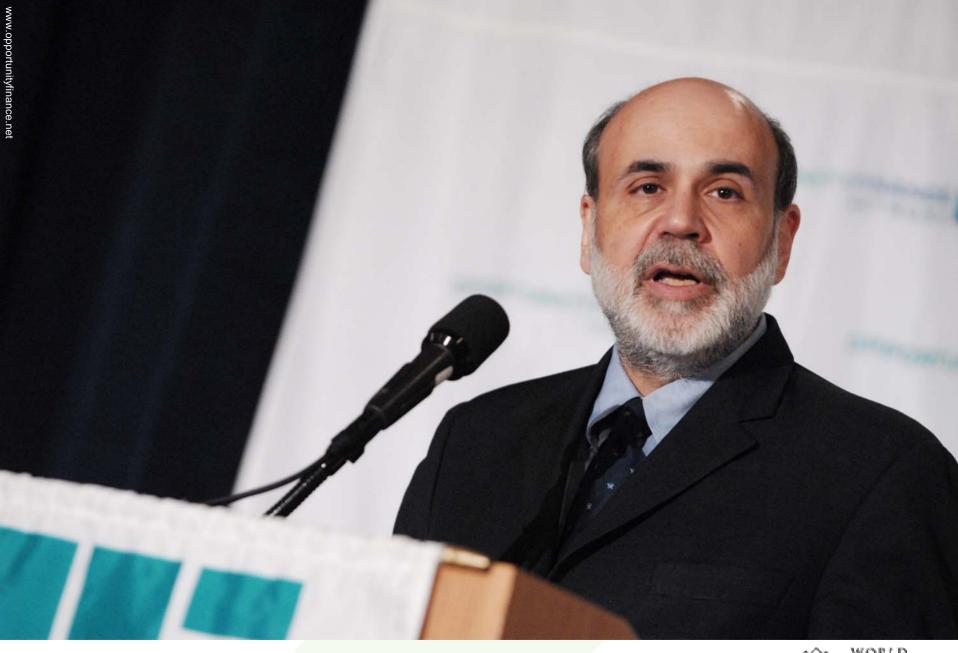
Carbon sequestration

#### Cultural

Spiritual and religious values
Aesthetic values

Recreation & ecotourism







What is this?



\$6 billion





http://ny.cf.er.usgs.gov

### What is this?



Water regu





#### What is this?



\$200 billion



Storm protection system



### **Tradeoffs**

Enhancement of some services often leads to degradation of others – who gets the benefits and who bears the cost?



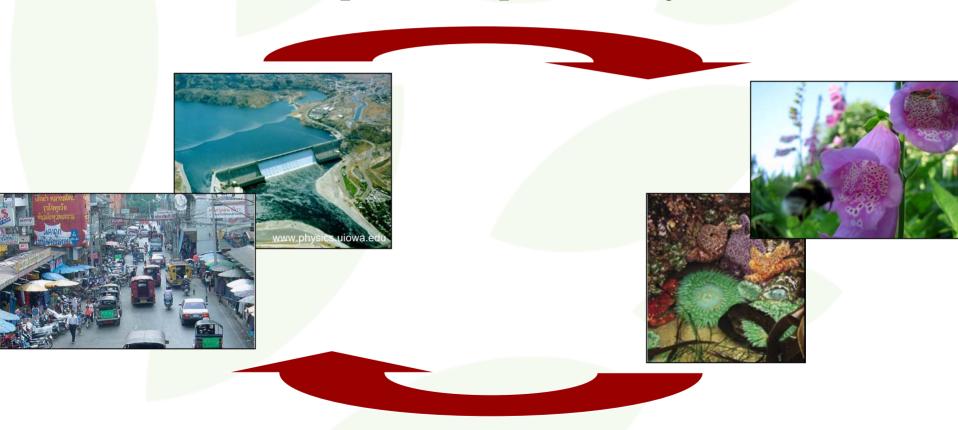


Value of ecosystem services are not being taken into account: Mangrove conversion Net present value [real]kperphædtanæare 10,000 -Mangrove: \$82,3696 Shrimp farm: \$534403 Value (USD/ha/yr) Shrimp (net): \$8,340 Coastal protection (\$34,453)5000 Fishery nursery (\$420) Less subsidies (-\$7,176) Note: 10% discount rate Timber and non-timber Source: Millennium Ecosystem ▶ Pollution Costs (-\$951) Assessment: Sathirathai and Barbier 2001 ✓ products (\$823) Restoration (-\$5,656) Shr arm Mangrove



# Seeing two sides of the coin

**Development impacts ecosystems** 

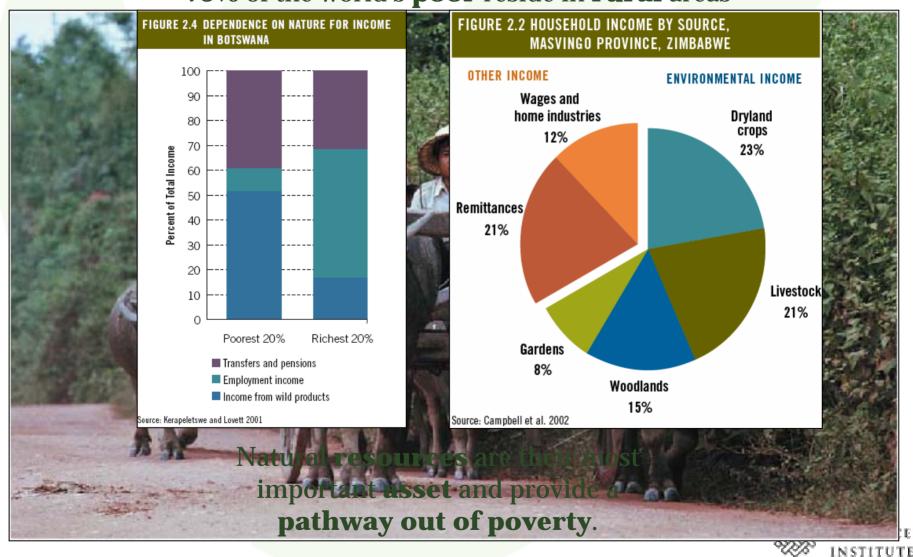


**Ecosystems sustain development** 



## **Ecosystem services & poverty**

75% of the world's **poor** reside in **rural** areas



### Governance

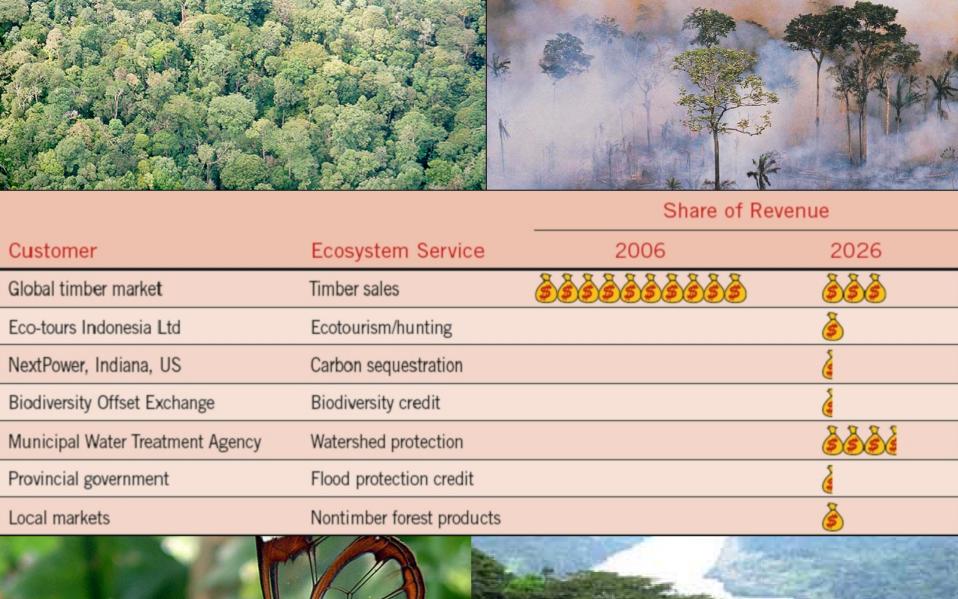
Who makes decisions, how they are made and with what information matters to the health of ecosystems



WORLD Resource! Institute



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WRI REPORT



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#### RESTORING NATURE'S CAPITAL

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### Diagnosis:

People fail to connect healthy ecosystems and the attainment of socioeconomic goals





Develop and use information on ecosystem services







Diagnosis:

Local people lack rights



### Prescription:

**Strengthen rights** of local people over ecosystems





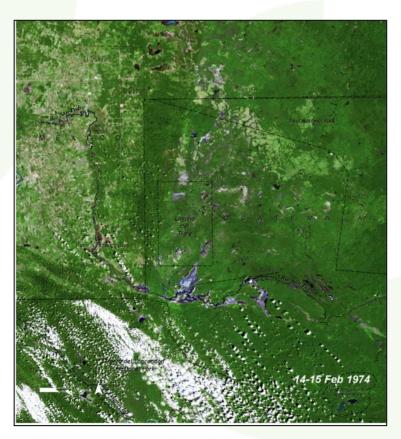
Diagnosis:

Management of ecosystems is fragmented across agencies





Manage ecosystem services across multiple levels





### Diagnosis:

Governments and businesses are **not** held **responsible** for ecosystem management

### Prescription:







Diagnosis:

Ecosystem stewardship does not always pay

Prescription:



Align financial and economic **incentives** 





### Advancing the action agenda at WRI

WRI is strengthening public and private sector development strategies by increasing the availability and use of ecosystem service information and aligning economic incentives with ecosystem stewardship

