



Why do Forest Ecosystems Matter?

Results of the Millennium Ecosystem Assessment

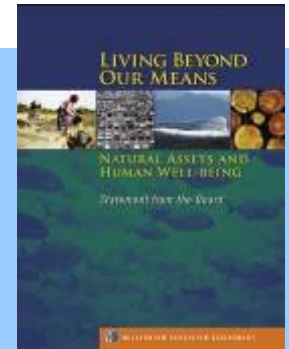
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7 June 2006
Gland, Switzerland

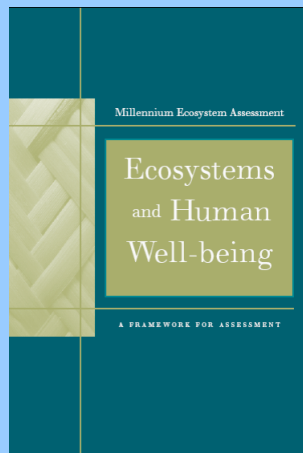
Products of the Millennium Ecosystem Assessment



Synthesis Reports



Board Statement



MA Conceptual Framework



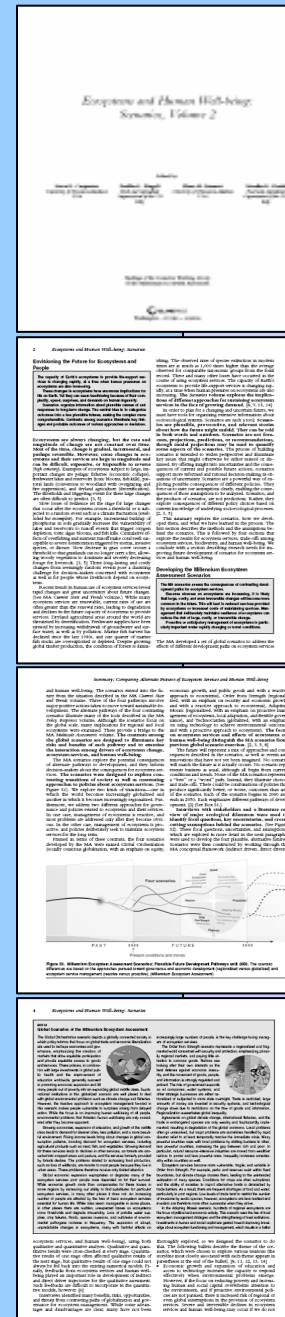
Technical Assessment Volumes

Meters

600

Eiffel
Tower
312 m

300

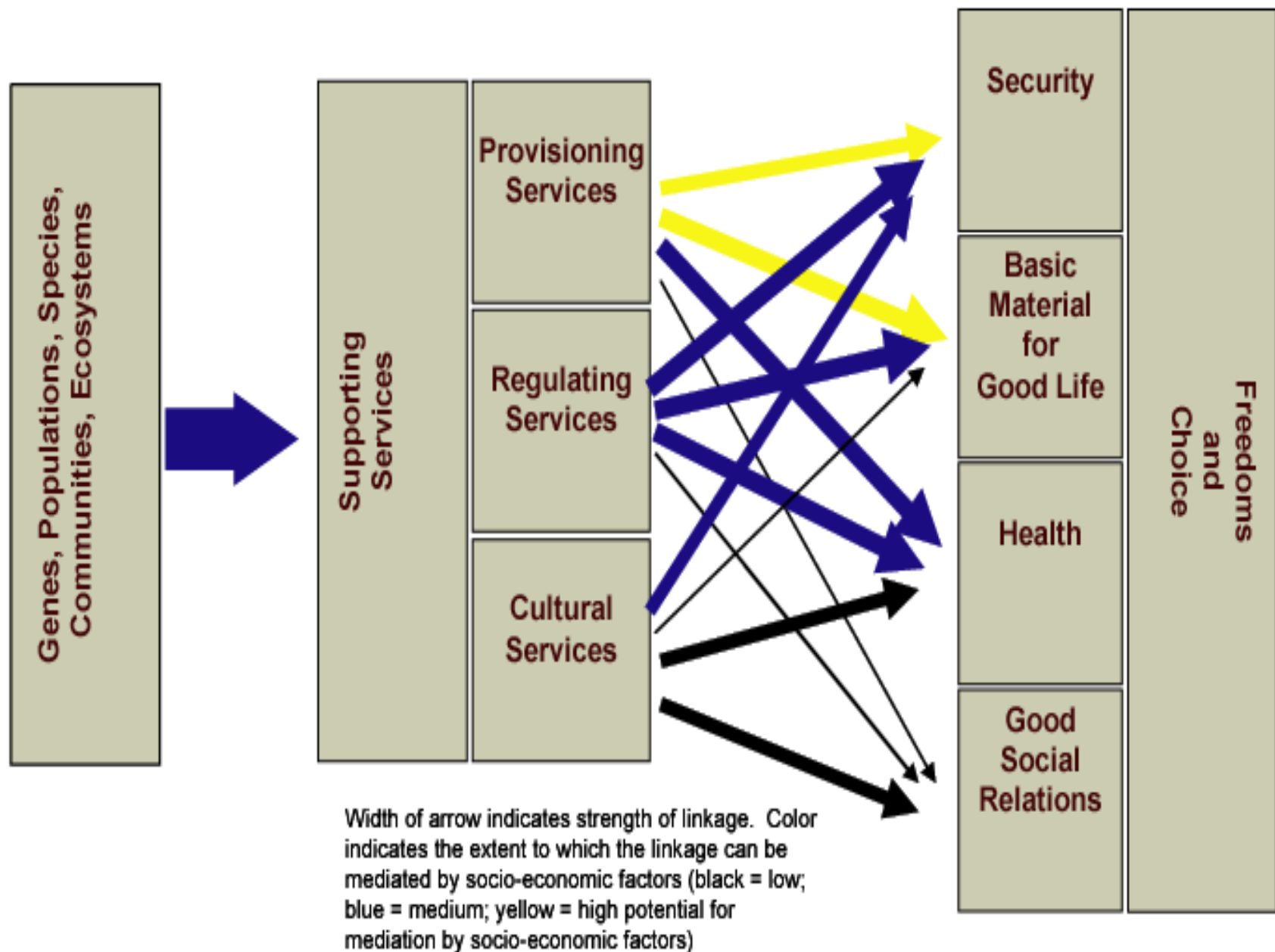


Millennium
Assessment
(Pages end to
end, 850 m)

Biodiversity

Ecosystem Services

Constituents of Well-being



Provisioning Services

Goods produced or provided by ecosystems

- Food

- Crops
- Livestock
- Capture fisheries
- Aquaculture
- Wild Foods



- Fiber

- Timber
- Cotton, hemp, silk
- Wood fuel



- Genetic resources

- Biochemicals

- Freshwater



Regulating Services

Benefits obtained from regulation of ecosystem processes

- Air quality regulation
- Erosion regulation
- Climate regulation
- Water purification
- Disease regulation
- Pest regulation
- Pollination
- Natural hazard regulation



Cultural Services

Non-material benefits obtained from ecosystems

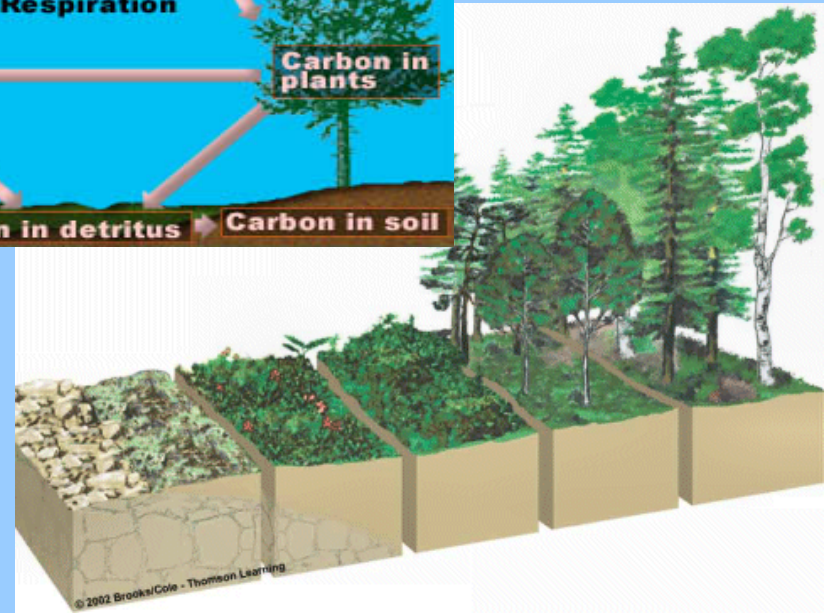
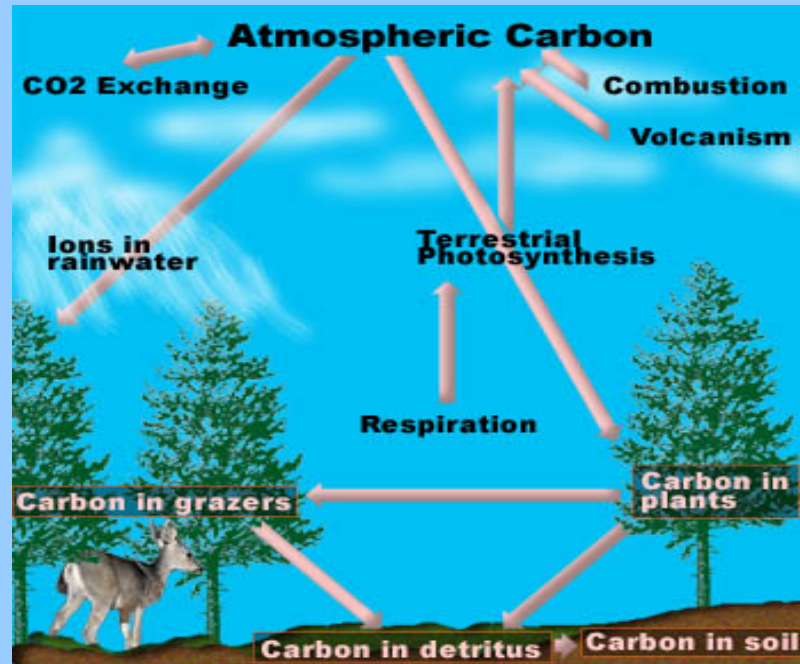
- Spiritual and religious values
- Knowledge systems
- Educational values
- Inspiration
- Aesthetic values
- Social relations
- Sense of place
- Recreation and tourism



Supporting Services

The services necessary for the production of the other ecosystem services

- Soil formation
- Nutrient cycling
- Primary production
- Carbon sequestration



The MEA Balance Sheet

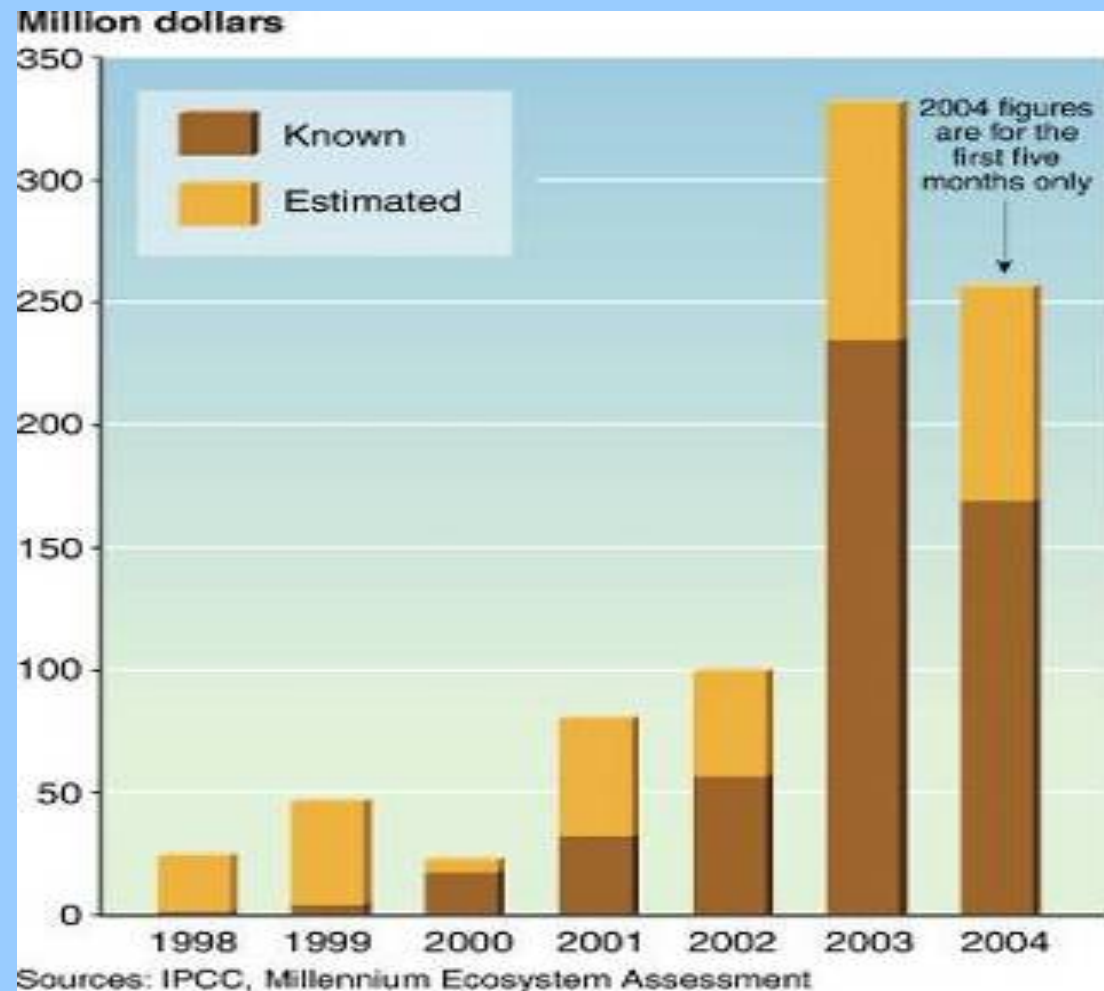
Enhanced	Degraded	Mixed
Crops Livestock Aquaculture Carbon sequestration	Capture fisheries Wild foods Wood fuel Genetic resources Biochemicals Fresh Water Air quality regulation Regional & local climate regulation Erosion regulation Water purification Pest regulation Pollination Natural Hazard regulation Spiritual & religious Aesthetic values	Timber Fiber Water regulation Disease regulation Recreation & ecotourism

**Bottom Line: 60% of Ecosystem
Services are Degraded**

Ecosystem services: Carbon sequestration

Carbon sequestration, often supported under the Kyoto Protocol, is one of the best-known forest ecosystem services.

Market value of carbon trading in 2005: US\$ 11 billion.



The growth of trade in carbon offsets

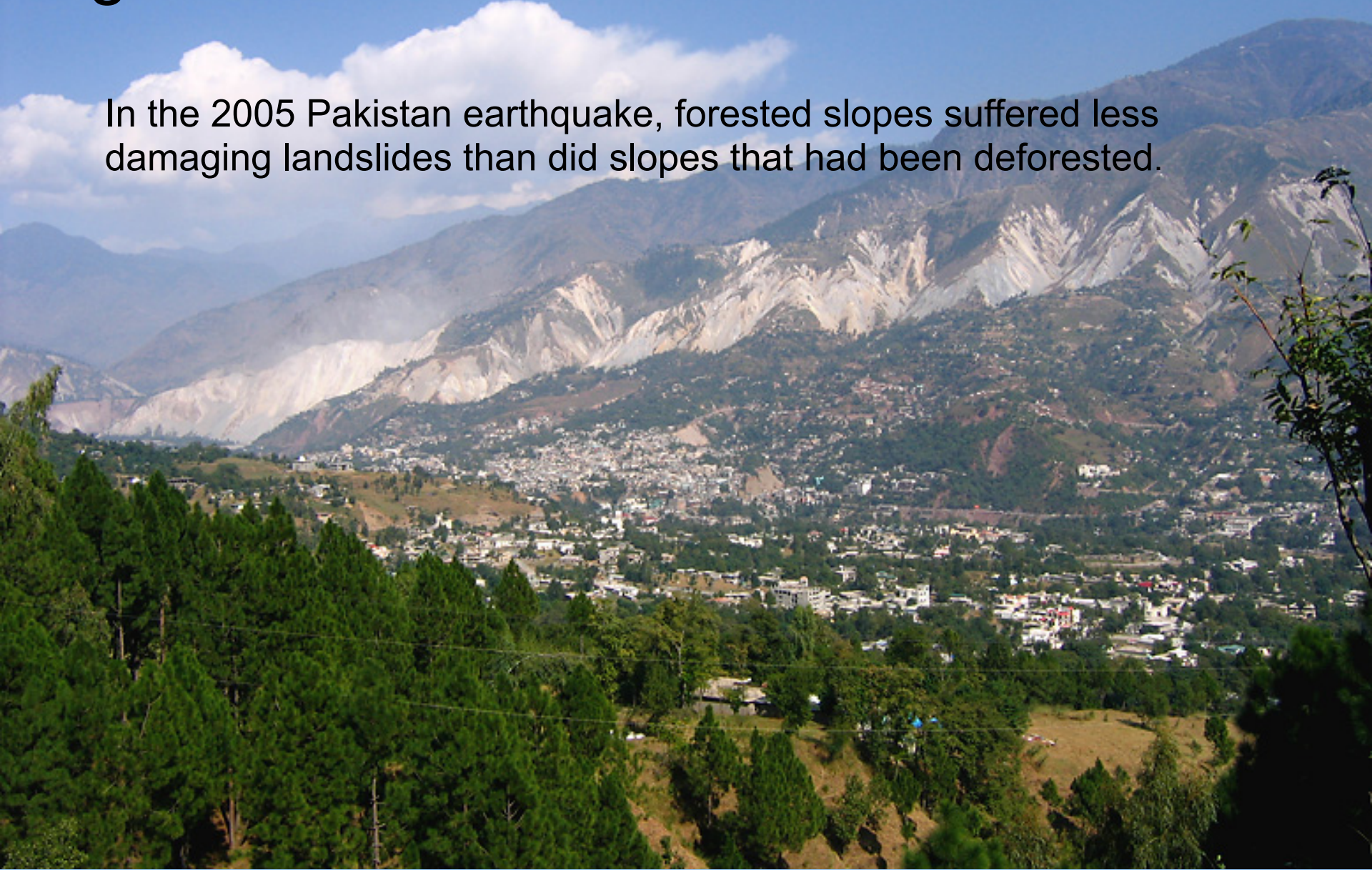
Watershed protection services have multiple benefits

- Provision of water
- Hydropower, navigation
- Water storage to buffer floods, droughts
- Control of erosion and sedimentation
- Maintain river channels, riparian habitats
- Maintain coastal vegetation requiring freshwater
- Maintain water quality
- Control groundwater levels, reducing salinity



Intact ecosystems can provide protection against extreme natural events

In the 2005 Pakistan earthquake, forested slopes suffered less damaging landslides than did slopes that had been deforested.



		Habitat change	Climate change	Invasive species	Over-exploitation	Pollution (nitrogen, phosphorus)
Forest	Boreal					
	Temperate					
	Tropical					
Dryland	Temperate grassland					
	Mediterranean					
	Tropical grassland and savanna					
	Desert					
Inland water						
Coastal						
Marine						
Island						
Mountain						
Polar						

Trends in Drivers

Source: Millennium Ecosystem Assessment

Driver's impact on biodiversity over the last century

Low

Moderate

High

Very high

Driver's current trends

Decreasing impact

Continuing impact

Increasing impact

Very rapid increase of the impact

Sc

Response 1: Help local people capture benefits from ecosystem services



Response 2: Integrate ecosystem services into regional planning



Response 3: Encourage private sector involvement in biodiversity conservation



Integrating Biodiversity
Conservation into
Oil & Gas Development

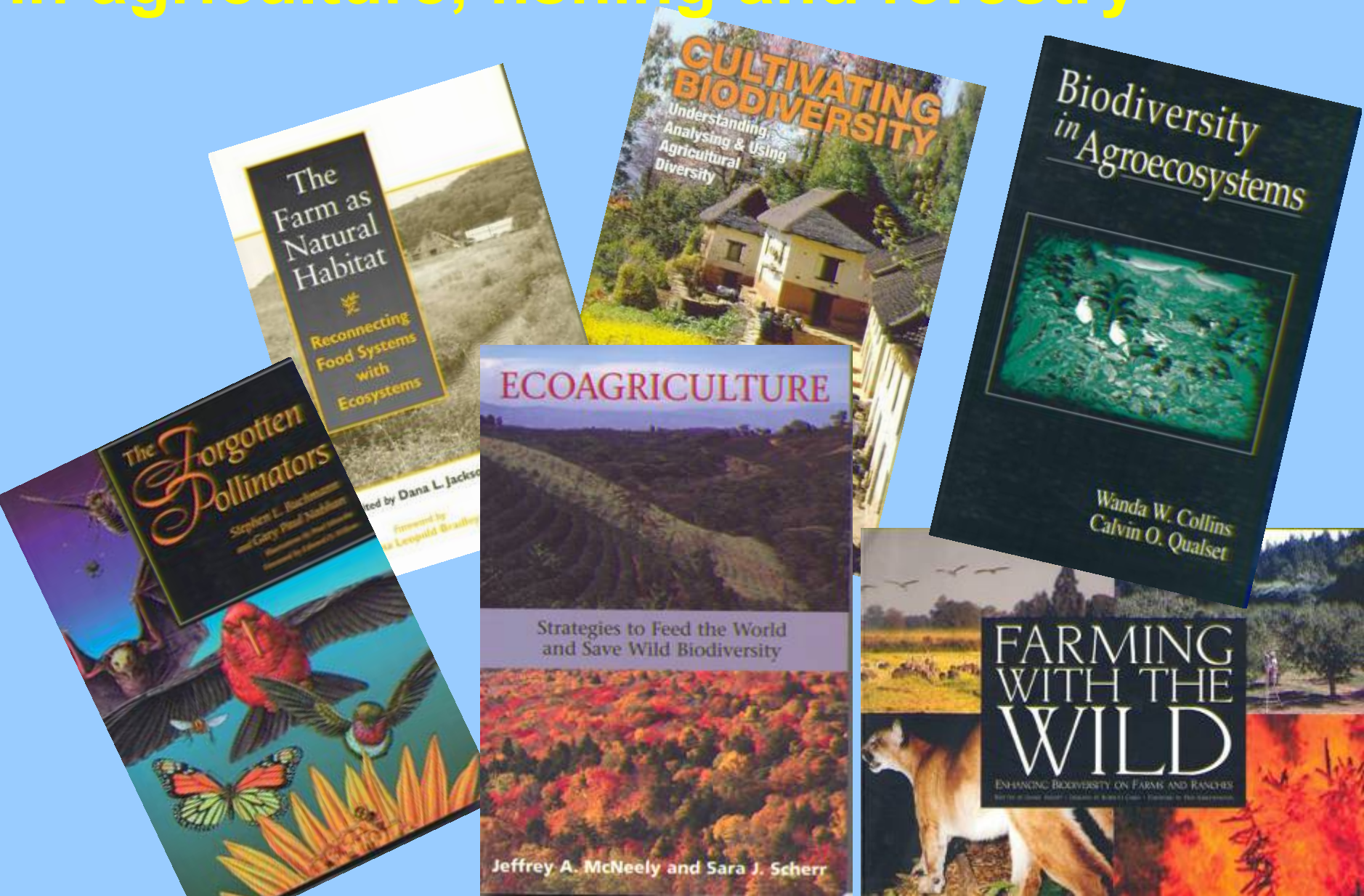


The Energy & Biodiversity Initiative

EBI

BP • ChevronTexaco • Conservation International • Fauna & Flora International
IUCN • The Nature Conservancy • Shell • Smithsonian Institution • Statoil

Response 4: Include biodiversity issues in agriculture, fishing and forestry



Response 5: Design governance that supports ecosystem services



Responding to the loss of ecosystem services may cost money.

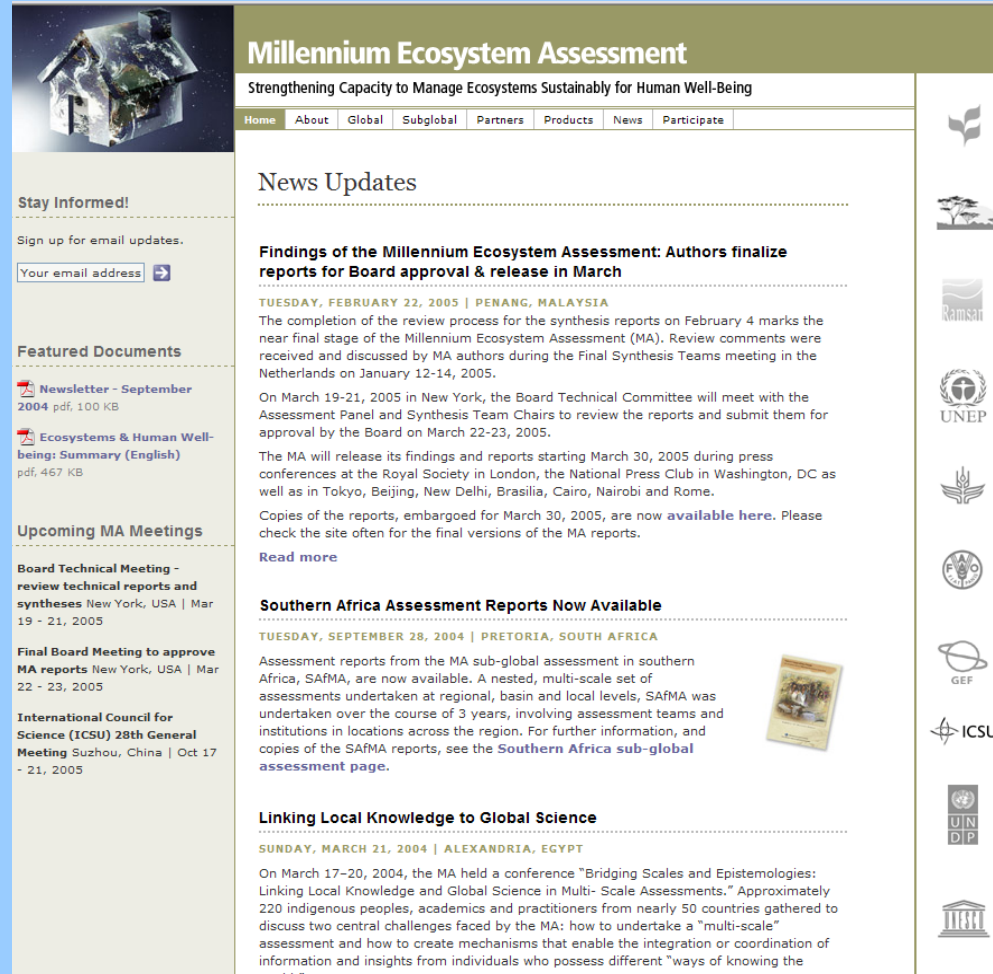
Not responding is likely to cost even more.



Visit the MA Website

www.MAweb.org

- All MA reports available to download
- Access to core data
- MA 'outreach' kit
 - Slides
 - Communication tools



The screenshot shows the homepage of the Millennium Ecosystem Assessment (MA) website. The header features the title "Millennium Ecosystem Assessment" and the subtitle "Strengthening Capacity to Manage Ecosystems Sustainably for Human Well-Being". A navigation bar includes links for Home, About, Global, Subglobal, Partners, Products, News, and Participate. The main content area is divided into several sections: "Stay Informed!" with an email sign-up form, "Featured Documents" listing a newsletter and a summary, "Upcoming MA Meetings" with details on technical and board meetings, and news updates. The "News Updates" section highlights the finalization of reports for Board approval in March 2005, the completion of the review process in Penang, Malaysia, and the release of findings starting in March 2005. It also mentions the Southern Africa Assessment Reports and the Linking Local Knowledge to Global Science conference. The right sidebar contains a vertical column of logos for various organizations, including UNEP, FAO, ICSU, and UNDP.

Millennium Ecosystem Assessment
Strengthening Capacity to Manage Ecosystems Sustainably for Human Well-Being

Home About Global Subglobal Partners Products News Participate

News Updates

Findings of the Millennium Ecosystem Assessment: Authors finalize reports for Board approval & release in March

TUESDAY, FEBRUARY 22, 2005 | PENANG, MALAYSIA

The completion of the review process for the synthesis reports on February 4 marks the near final stage of the Millennium Ecosystem Assessment (MA). Review comments were received and discussed by MA authors during the Final Synthesis Teams meeting in the Netherlands on January 12-14, 2005.

On March 19-21, 2005 in New York, the Board Technical Committee will meet with the Assessment Panel and Synthesis Team Chairs to review the reports and submit them for approval by the Board on March 22-23, 2005.

The MA will release its findings and reports starting March 30, 2005 during press conferences at the Royal Society in London, the National Press Club in Washington, DC as well as in Tokyo, Beijing, New Delhi, Brasilia, Cairo, Nairobi and Rome.

Copies of the reports, embargoed for March 30, 2005, are now [available here](#). Please check the site often for the final versions of the MA reports.

[Read more](#)

Southern Africa Assessment Reports Now Available

TUESDAY, SEPTEMBER 28, 2004 | PRETORIA, SOUTH AFRICA

Assessment reports from the MA sub-global assessment in southern Africa, SAfMA, are now available. A nested, multi-scale set of assessments undertaken at regional, basin and local levels, SAfMA was undertaken over the course of 3 years, involving assessment teams and institutions in locations across the region. For further information, and copies of the SAfMA reports, see the [Southern Africa sub-global assessment page](#).

Linking Local Knowledge to Global Science

SUNDAY, MARCH 21, 2004 | ALEXANDRIA, EGYPT

On March 17-20, 2004, the MA held a conference "Bridging Scales and Epistemologies: Linking Local Knowledge and Global Science in Multi-Scale Assessments." Approximately 220 indigenous peoples, academics and practitioners from nearly 50 countries gathered to discuss two central challenges faced by the MA: how to undertake a "multi-scale" assessment and how to create mechanisms that enable the integration or coordination of information and insights from individuals who possess different "ways of knowing the world."

Logos on the right sidebar: UNEP, FAO, ICSU, GEF, UNDP, and others.