Millennium Ecosystem Assessment

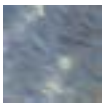
Global Data Challenges from an MA perspective

Global Spatial Data and Information User Workshop
21-23 September 2004

- What is the MA?
- How and what kinds of data does it use?
- Positives
- Challenges


The Millennium Ecosystem Assessment Overview





An international scientific assessment to be completed in 2005:

Focuses on the changes in ecosystem services and the consequences of these changes for human well-being and for other life on earth

Structured around working groups:

Condition - current and historical trends

Scenarios - plausible changes in primary drivers, what will be the consequences

Responses – what can be done about it?

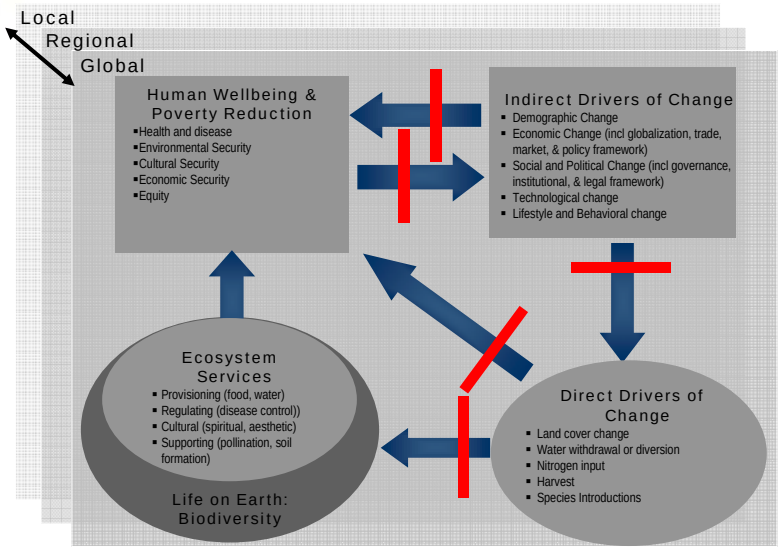
Sub-global - All of the above... at sub-global scales

Audience:

- Conventions (CBD, CCD, CMS Ramsar),
- Governments and policy makers,
- the private sector and civil society

Millennium Ecosystem Assessment

Conceptual Framework



Millennium Ecosystem Assessment

Data Sources and Analytical Approaches

In assessing ecosystem conditions and trends use data derived through:

- Modeling – hydrologic, population, climate and land-atmosphere, ecosystem process models, global terrestrial ecosystem models
- Remote sensing
- Inventories – natural resource and biodiversity, socio-cultural
- Indicators – of ecosystem condition
- Indigenous knowledge

Content of data:

Drivers of change:	land cover, climate
Ecosystem condition:	vegetation, soil, biodiversity, freshwater
Ecosystem service:	food production, flood mitigation, biological products, cultural services

Millennium Ecosystem Assessment

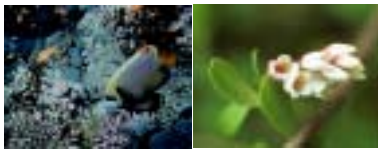
What are the Positives?

Data:-

- many useful global data sets out there
- many are freely available or at a reasonable cost

Technology:-

- quick access to data
- quick to visualize data
- presented with options of similar datasets
- in most cases have some form of metadata



Millennium Ecosystem Assessment

Global Spatial Data Challenges

Some of the data challenges the MA faced:

- **Trend data:** major lack of data in allowing for analysis of trends
  - biodiversity
  - land cover change
  - monitoring stations being rationalised
- **Lack of current data**
  - global spatial map of invasive species
  - cultural

Millennium Ecosystem Assessment

- **Multiple data sources:** for an assessment not a bad thing…
  - understanding of data quality of the data
  - global data varies in accuracy across space and categorisation
  - value of regional datasets and regional knowledge
- **Variations in scale of capture**
  – environmental factors do not follow human-made boundaries

Millennium Ecosystem Assessment

Finally…

Clearinghouses

no doubt a great advantage – careful of overwhelming users with too much information – jargon – and language difficulties

Metadata

good – need to go a step further – provide tools to choose from multiple sources – some indication of the quality of the dataset –inclusion of strengths and weaknesses

Anticipate what's needed – **look back** to what we have to enhance future assessments of this kind

Millennium Ecosystem Assessment