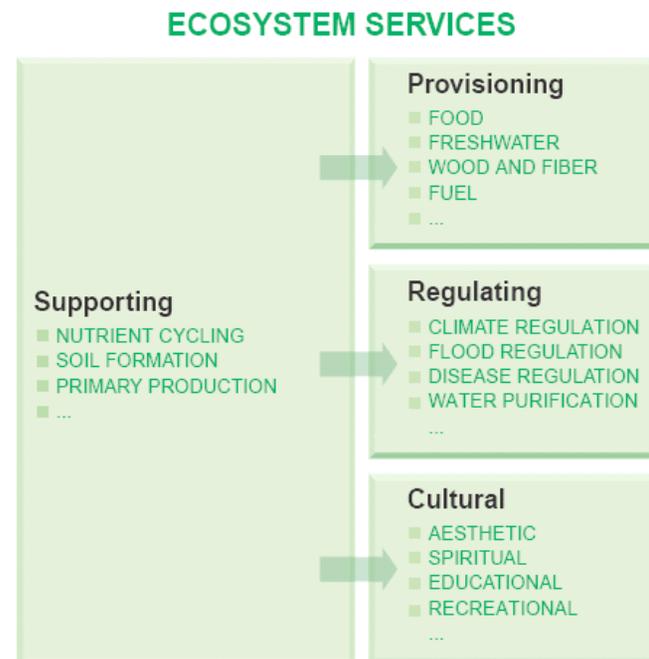


Ecosystem Services

What metrics does the sector use for valuation?

- Work, or functioning, that ecosystems do from which we benefit
- Benefit can be direct or indirect
- An unabashedly anthropocentric concept at its core
- Originally articulated to point out that there are things that ecosystems provide that we depend on, but do not pay for (until we have to replace them)
- This concept has grown to recognize that services can be either outside or inside of existing markets

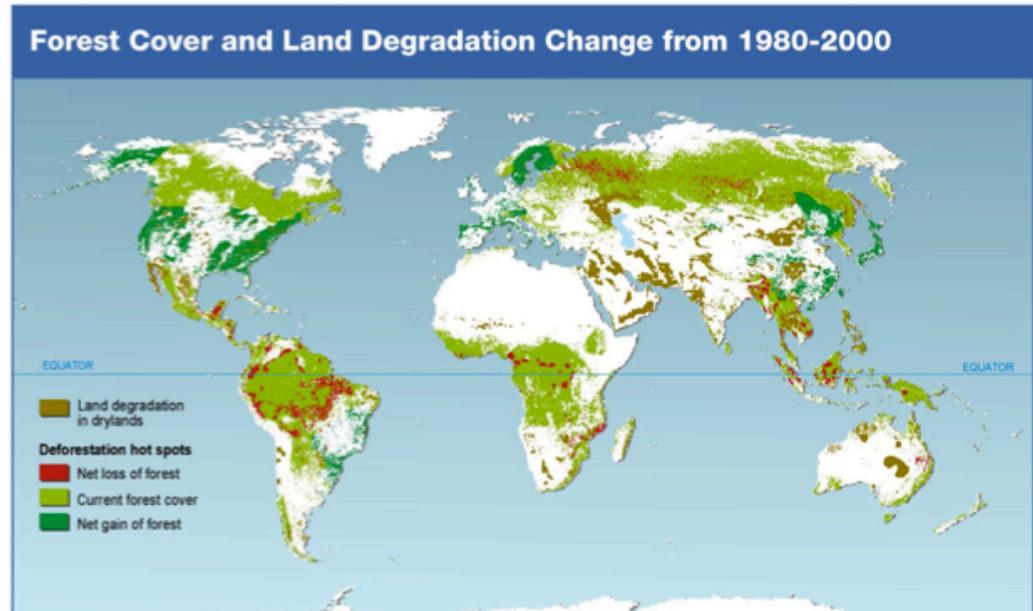
- From the MEA



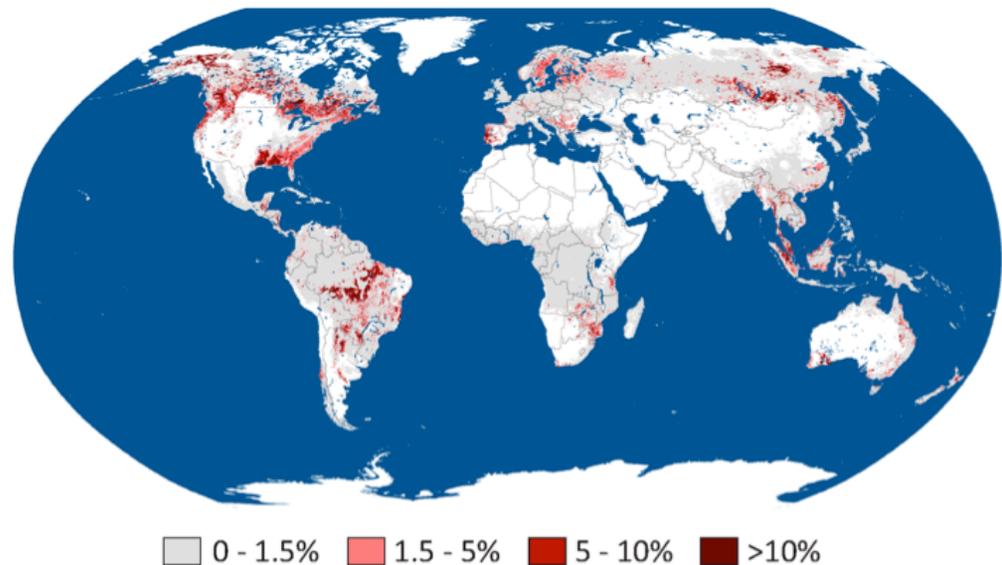
Ecosystem Services

How are these metrics defined and used?

- Understanding tradeoffs
 - The changes that have been made to ecosystems have contributed to substantial net gains in human well-being and economic development
 - But these gains have been achieved at growing costs that, unless addressed, will substantially diminish the benefits that future generations obtain from ecosystems
- This is possible for some tradeoffs:
 - Increase in timber production against carbon sequestration potential
 - Increase in agricultural output against a variety of other ecosystem services
- Not possible for others because of lack of information on state, even though we understand processes



Percent forest cover loss, 2000 to 2005



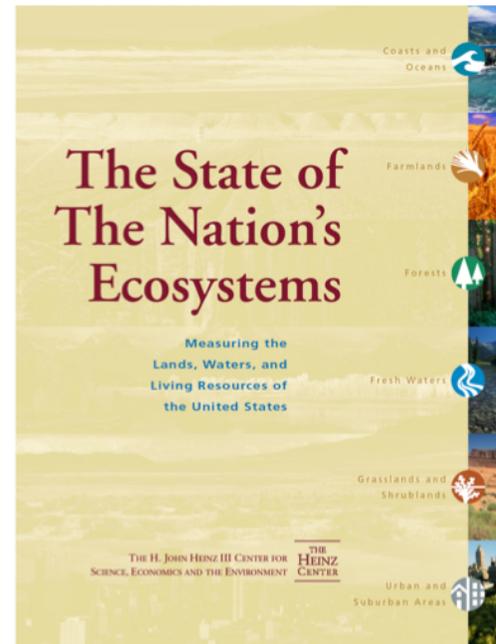
Ecosystem Services

What are the advantages?

- Does not require market valuation of services for those that are not easily treated that way – but does not exclude that valuation, either
- Explicitly allows consideration of tradeoffs and interactions among sectors
- Reasonable generality without sacrificing importance of regional specificity

Can you think of any disadvantages?

- Has proven difficult to translate clearly into policy domains and decisions – communications issues
- Need to focus on change, not single estimates
- How uncertainties are to be treated still needs work



What Indicators Are Used To Describe Farmlands?			Can we report trends? Are there other useful reference points?
BIOLOGICAL COMPONENTS			
⊖	Soil Biological Condition	What is the condition of the microscopic animal communities in cropland soils?	No data reported
?	Status of Animal Species in Farmlands Areas	What is the condition of wildlife in areas that are heavily dominated by farmlands?	No data reported
?	Native Vegetation in Areas Dominated by Croplands	In areas that are heavily dominated by croplands, is most of the remaining non-cropland vegetation native or non-native?	No data reported
?	Stream Habitat Quality	What is the quality of the habitat in farmland streams?	No data reported
HUMAN USES			
●	Major Crop Yields	How has the per-acre yield of major crops changed over time?	Trends
●	Agricultural Inputs and Outputs	How have farm output and the inputs (pesticides, fertilizers, labor, land, etc.) needed to produce that output, changed over time?	Trends
●	Monetary Value of Agricultural Production	What is the value of the nation's production of crops and livestock?	Trends, national map
⊖	Recreation on Farmlands	How much recreation takes place on farmlands?	No data reported
● All Necessary Data Available ● Partial Data Available ⊖ Data Not Adequate for National Reporting ? Indicator Development Needed			