

***Ecosystem Services:
Can we take the pulse of nature?***



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What are Ecosystem Services?



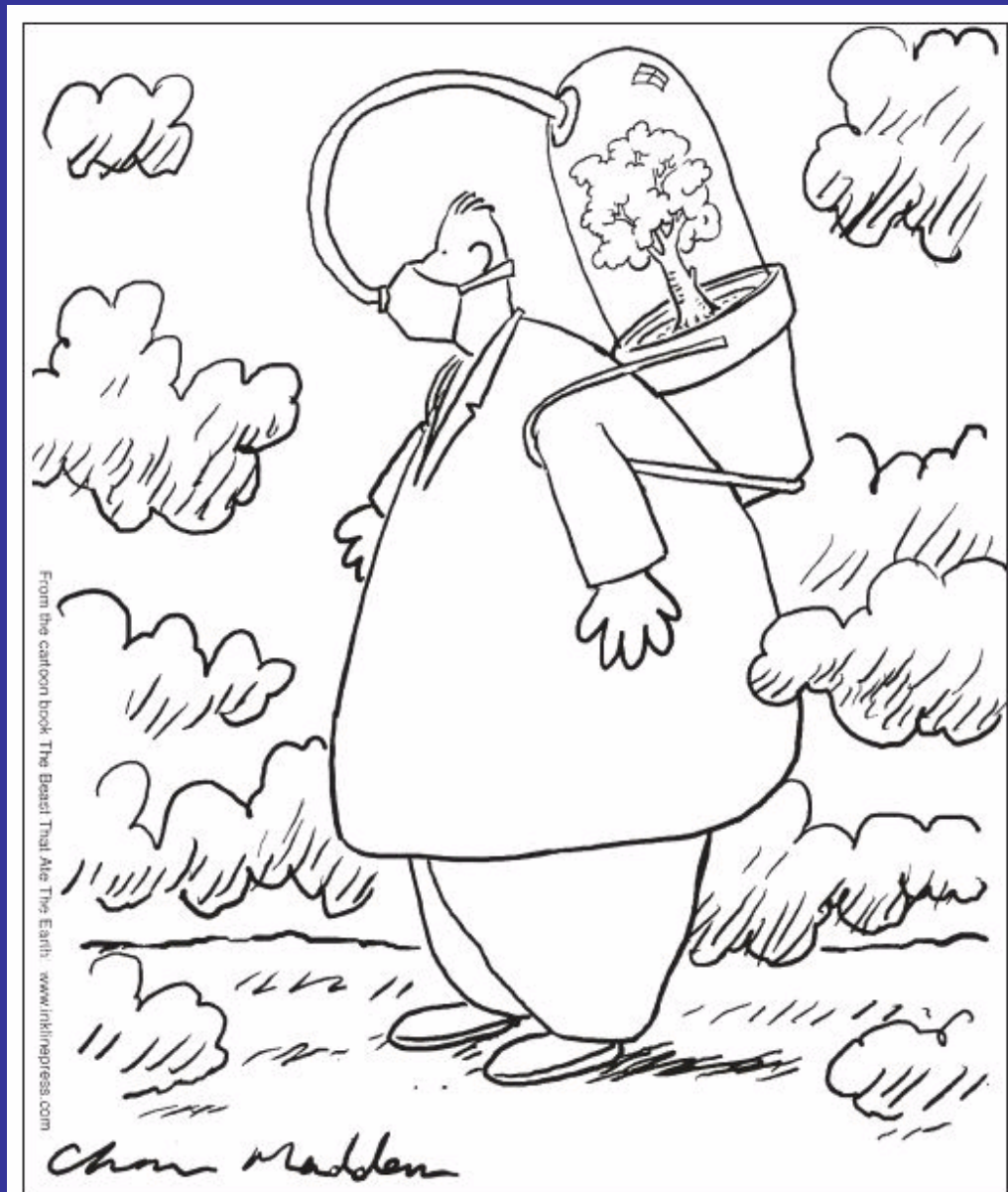
The benefits that people receive from well-functioning ecosystems, such as food, flood control, climate regulation, and recreation (SCEP 1970).

Examples

- **Pest control**
- **Insect pollination**
- **Fisheries**
- **Climate regulation**
- **Soil retention**
- **Flood control**
- **Soil formation and fertility**
- **Cycling of matter**
- **Composition of the atmosphere**
- **Maintenance of the genetic library**



Why do we need ecosystem services?



Can ecosystem services be quantified at a national scale?

Services often provided locally and regionally

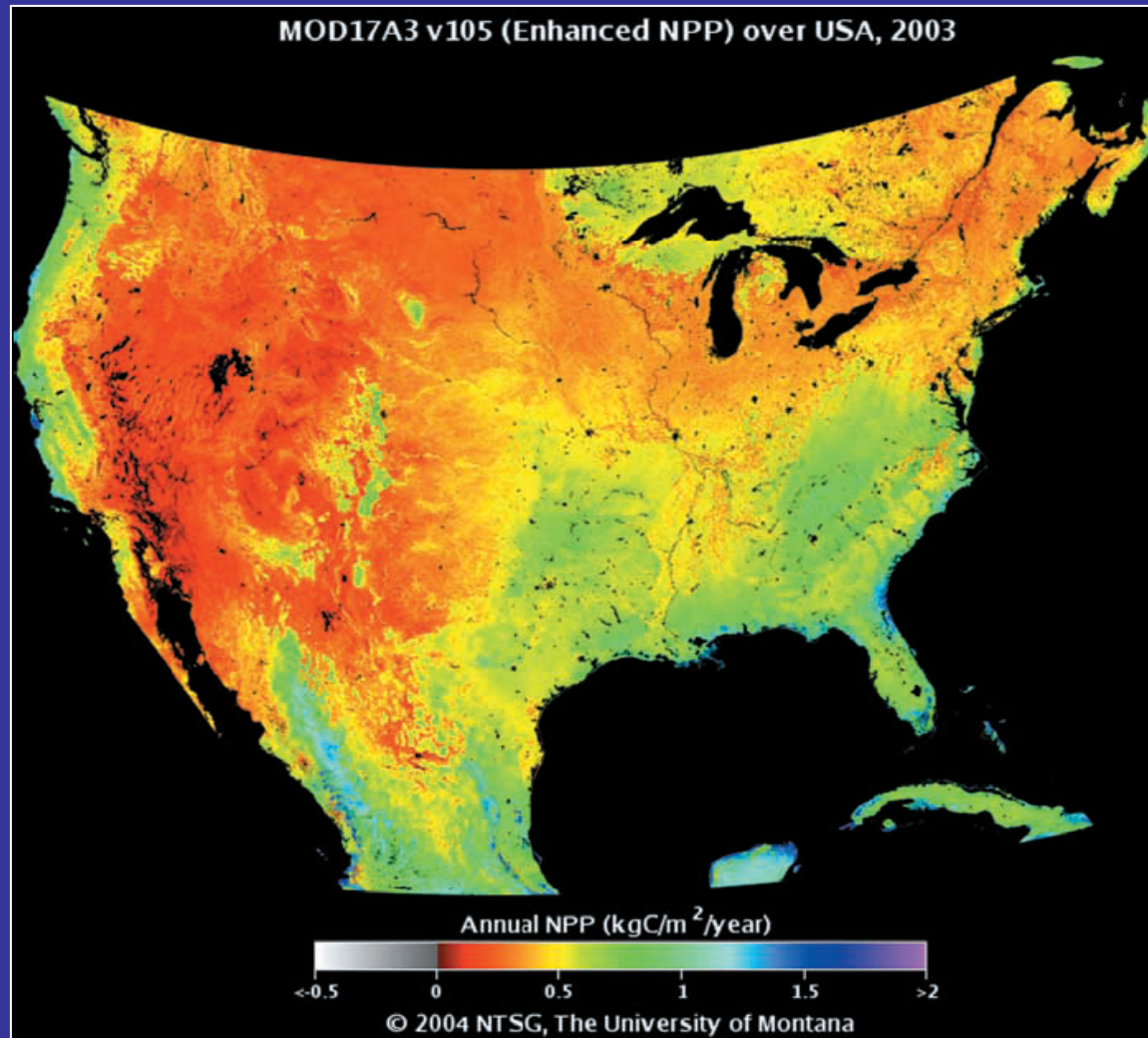
Aggregation of services would have to occur across multiple scales

Unlike economic systems, ecosystems across the country are not always well connected

Forested Watersheds



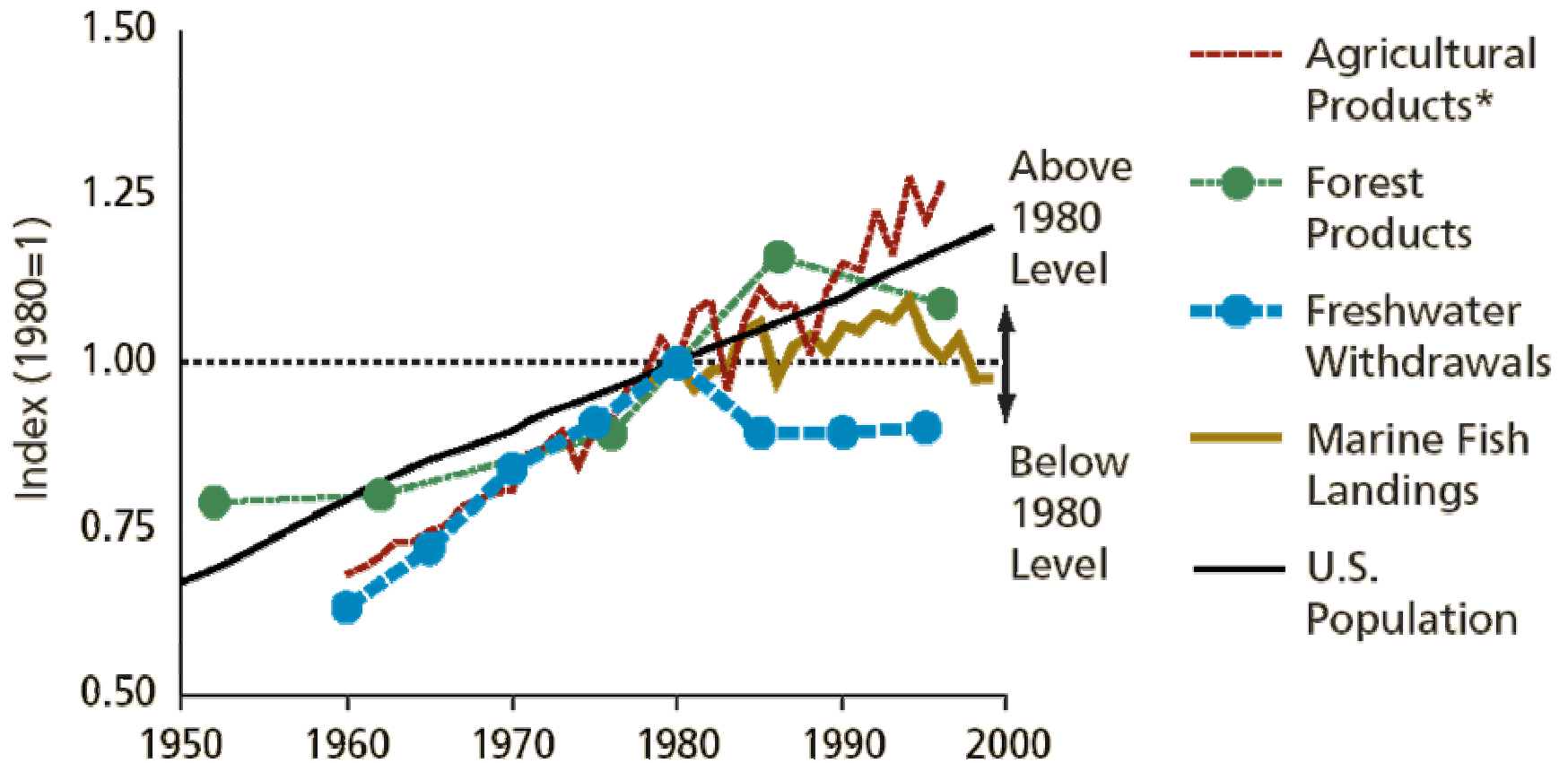
Net Primary Productivity



Pollination



Production of Food and Fiber and Water Withdrawals: Entire United States



* Including livestock raised on grasslands and shrublands.

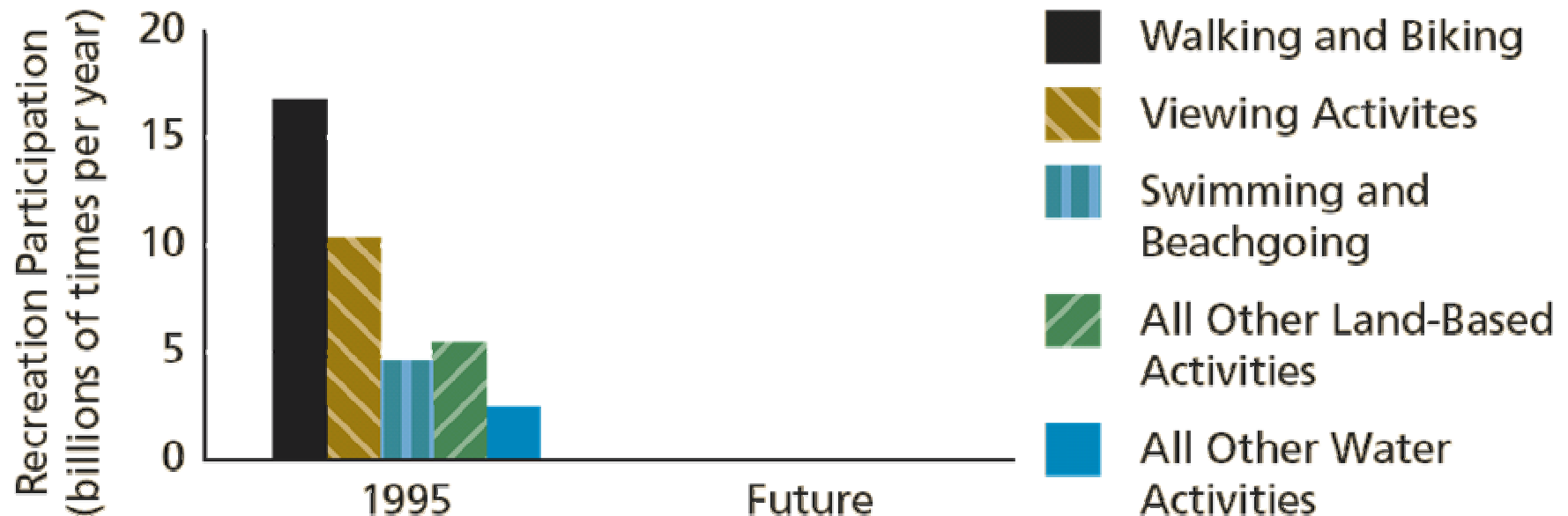
Note: Fish landings prior to 1978 do not include foreign landings, thus are not displayed. See p. 81 for more detail.

Participation in Outdoor Recreation Activities

**Data Not Adequate
for National Reporting
on**

■ Running and Jogging

Partial Indicator Data: Listed Activities



Indicator Development Needed

Valuing ecosystem services

- **Monetizing services**
- **Valuing services in other ways**
- **Values of services that cannot be easily monetized or quantified**
- **Methods by which public policy and private landowners can take each of these into account**

Why is this important?

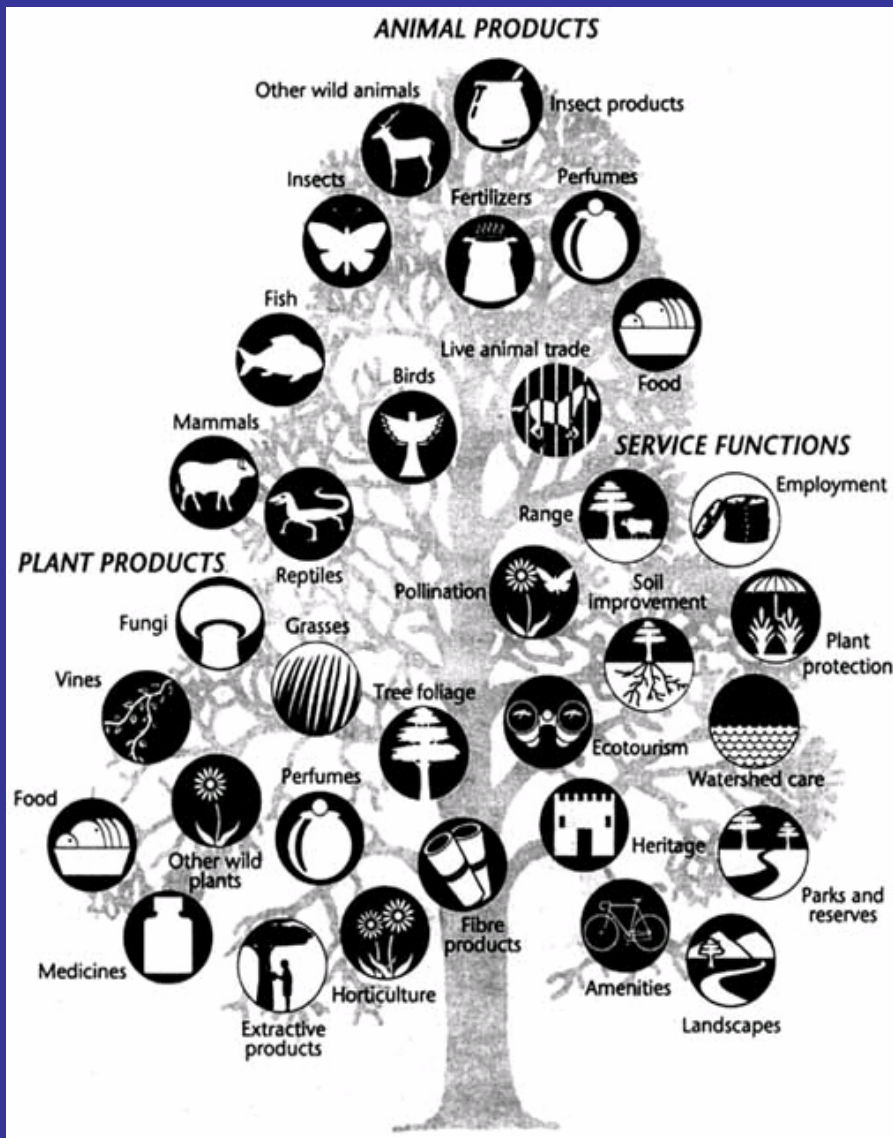
Reporting quantities of ecosystem services at the national level would allow the U.S. to track services lost or gained and develop appropriate responses to those changes



Why is this important?

Reporting trends in the quantities of ecosystem services provided and available is critical to their sustainable use

What is the pay off?



National level indicators of ecosystem services could provide guidance on the responsible and sustainable management of natural resources

Next Steps

Which services can and ought to be measured (this may vary according to sector)?

What ought to be measured to quantify the services and how this can be accomplished (conceptually and technologically)?

How to make any of the schemes of capturing the value of ecosystem services operational?

