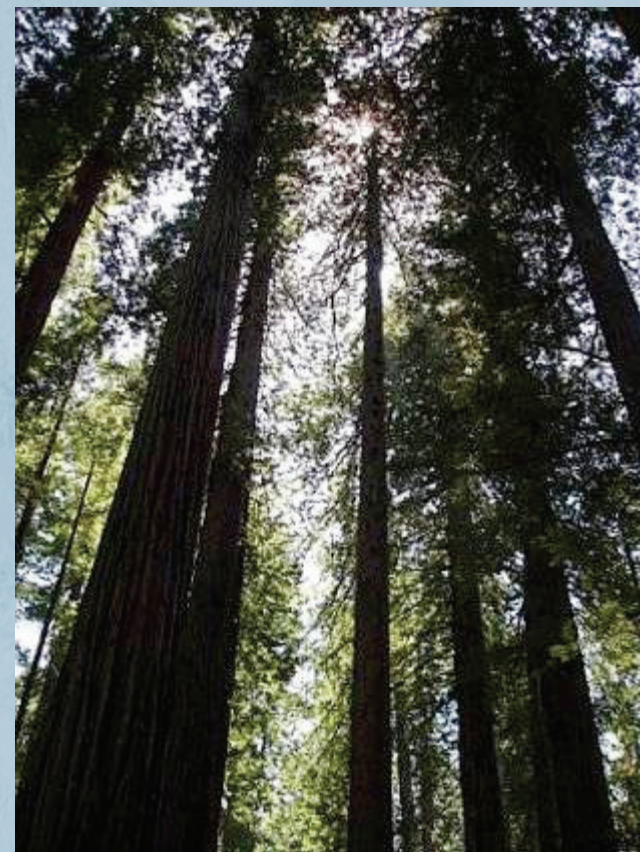


Measuring, Valuation and Pricing of Ecosystem Services

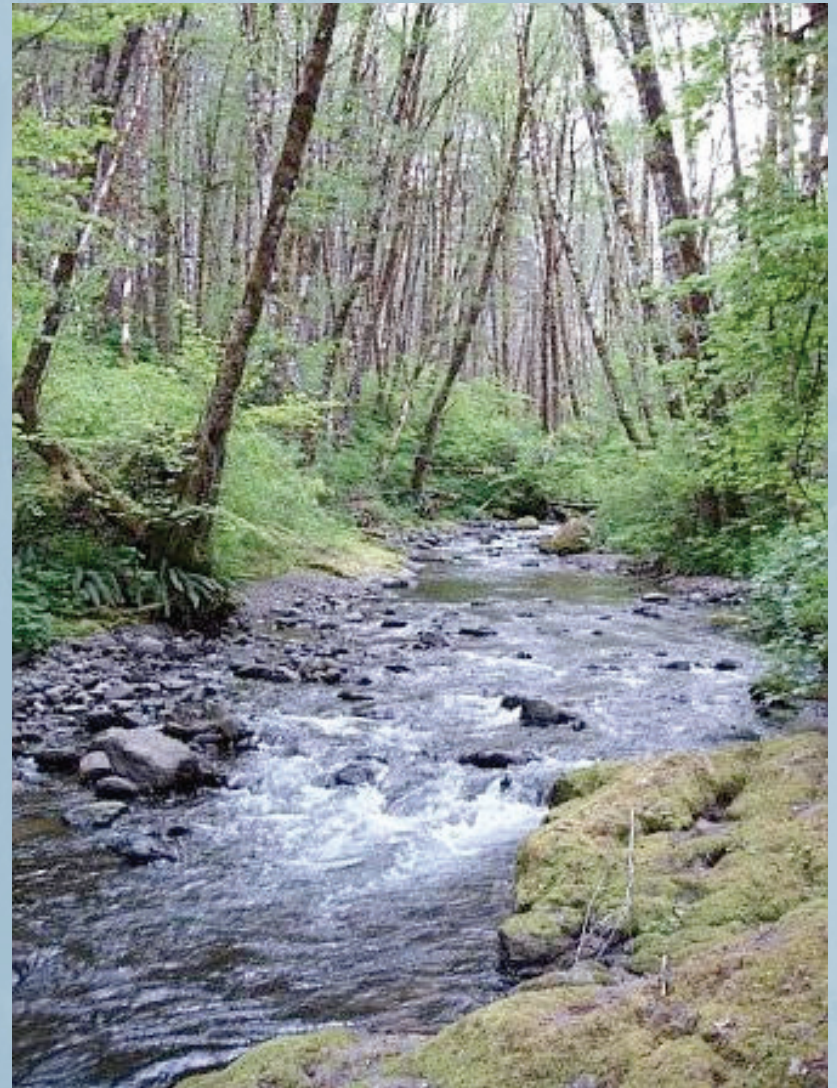
A Presentation for IntLCA
Portland, Oregon
October 2007

Sarah Kruse
Ecotrust, Portland, Oregon



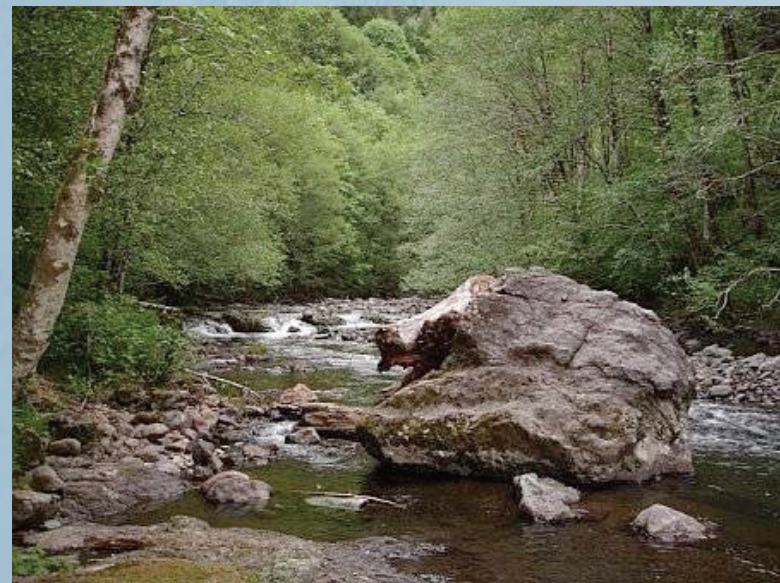
Ecosystem Service Values

- Why should we value ecosystem services?
 - Markets for ecosystem services rarely exist
 - Result is fewer ecosystem services than is optimal
- How are ecosystem services currently valued
 - Costanza et al. (1997): \$16-54 trillion/year for the entire biosphere (17 ecosystem service categories)
 - Gund Institute: Associating land cover types with ecosystem services



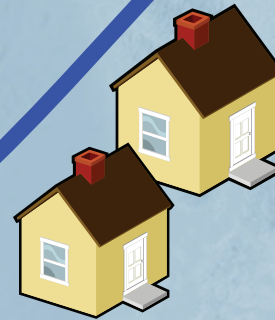
Ecosystem Service Markets

- How do we go from valuing ecosystem services to creating ecosystem service markets?
 - Most valuation is based on willingness-to-pay
 - Requires site specific analysis
 - Thinking from a supply chain perspective



Supply Chain Thinking

Willamette River and Water Quality



Lessons from LCA

- Conceptual similarities between issues ecosystem service markets are facing and issues LCA has already tackled
 - Developed whole system accounting
 - Standardized unit of measurement
 - Embedded in international standards
 - Traceable through the value/supply chain — headwaters to ocean
 - Methodological issues — need a standardized approach for similar markets
 - System boundaries
 - Allocation
-
- LCA potentially offers a body of literature and practice from which to learn
 - How to best map from LCA to ecosystem service markets

Thinking Forward

- Methodological expansions
 - New impact categories
 - e.g. Clean Water Act requires tracking of “water temperature”
 - Current databases may or may not be relevant under regulatory framework
-
- Ecosystem services in an applied context and the potential role of LCA (thinking)