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Session 7D

Quantification of Ecosystem Services

Standard Methods and Tools

GOVERNMENT'S ROLE IN TOOL DEVELOPMENT FOR ENVIRONMENTAL MARKETS

A Community on Ecosystem Services - December 11, 2014

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Unpacking the Toolbox

Why do we care about tools?

In the 2008 Farm Bill, Congress instructed USDA to establish uniform guidelines for science-based methods to measure ecosystem services benefits

… and facilitate the participation of farmers, ranchers, and forest landowners in emerging ecosystem services markets.

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What is a tool?

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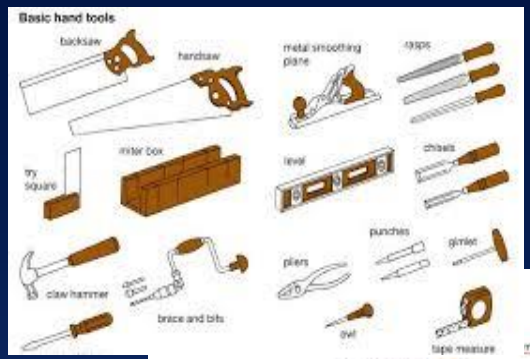
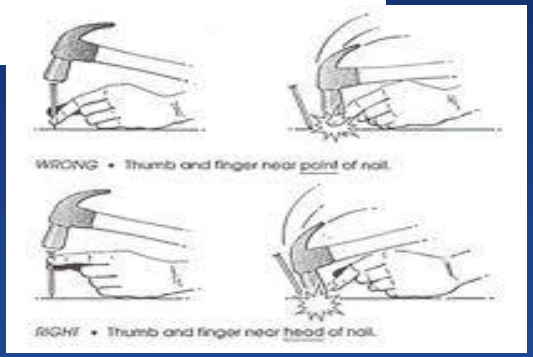
Properties of Effective Tools

- Transparent
- Science-based
- User-friendly
- Meaningful
- Appropriate
- Consistent
- Accepted
- Cost Effective
- Meet Regulatory Criteria





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Information Management Tools

Example: Water Quality Trading Roadmap

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Water Quality Trading Roadmap

Provide stakeholders with a web-based information resource to assist in the design, participation, and implementation of water quality trading and offset programs.

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Water Quality Trading Roadmap *Example*

I am a…

- Landowner/producer/credit seller
- Point source emitter/credit purchaser
- Market administrator

I would like to…

- Learn how the CWA applies to WQT
- Learn about EPA WQT Policy
- Find additional resources

In 2003, U.S. EPA released its national policy framework for water quality trading, which describes conditions for allowing off-site compliance for NPDES permit effluent limits. Trades and trading programs in impaired waters for which a TMDL has been approved or established by EPA should be consistent with the assumptions and requirements upon which the TMDL is established.

- Download the 2003 Policy
- Find additional resources
- Submit a question

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Water Quality Trading Roadmap
Timeline

- Now: Categorize resources and examples
- Next: Link database to “Ask the Expert” tool
- Next 3 months: Beta test tool
- September 2015: Final tool released

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Analytical Tools

Example: EnviroAtlas Market Plug-in

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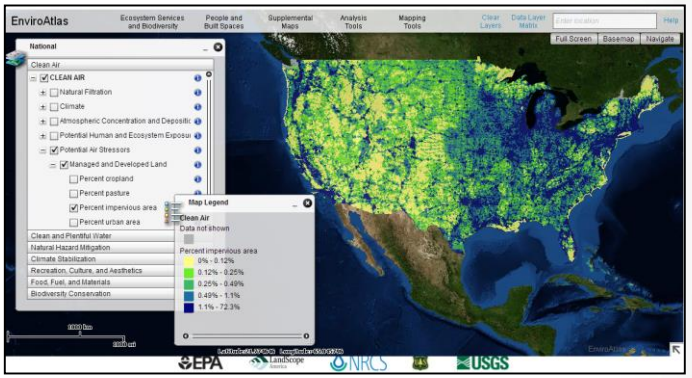
What is EnviroAtlas?

A web tool giving users ability to view, analyze, and download information to inform decisions concerning the places in which we live, work, derive resources, and play

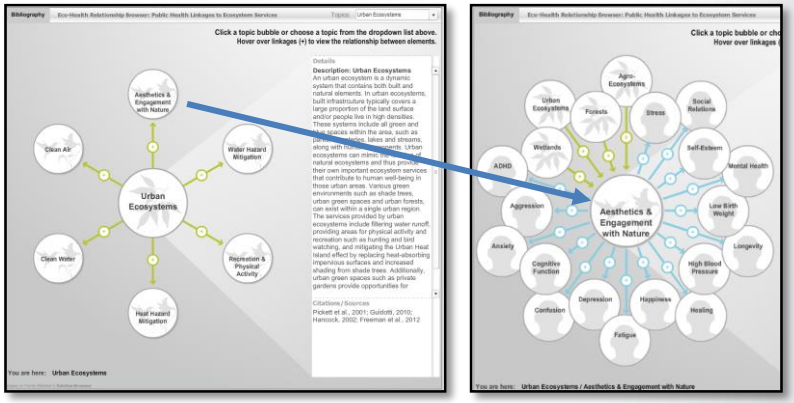
- Multi-agency effort – EPA, DOI, USDA
- Geospatial indicators and indices of the supply, demand, and benefits
- Drivers of change
- Reference data (e.g., boundaries, land cover, soils, hydrography, impaired water bodies, wetlands, demographics, community design)
- Analytic, mapping, and interpretive tools

EnviroAtlas: Connecting Ecosystems, People, and Well-being

http://enviroatlas.epa.gov



Interactive Mapping Application



Eco-Health Relationship Browser

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A Map-Based, Strategic Planning Tool for Environmental Markets

Collaboration between Federal agencies and Forest Trends' Ecosystem Marketplace to: "*Improve the quality and availability of information on environmental markets for market participants, administrators, and policy makers.*"

http://www.ecosystemmarketplace.com/

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EnviroAtlas Market Plug-in

Data and analytics on markets and payments for ecosystem services

Market Fundamentals

- Map of programs
  - Water, carbon, biodiversity
  - Active and developing
  - Public, private, PPP
- Map of opportunities
- Map of barriers
- Map of outcomes
- Map of investment levels
- Map of growth

Markets in Context

- Markets vs climate risk
- Markets vs conservation priorities
- Markets vs ecosystem service value
- Markets vs public health indicators
- Markets vs economic indicator
- Markets vs productive lands
- Markets vs public & private lands

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EnviroAtlas Market Plug-in *Timeline*

- Now: Scoping & Establishment of advisory group
- Next: Data collection and organization
- Next 15 months: Tool design, build and test
- Sept. 2016: Demonstration project complete

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Questions?

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