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ECOSYSTEM SERVICES RESEARCH PROGRAM
BUILDING A SCIENTIFIC FOUNDATION FOR SOUND ENVIRONMENTAL DECISIONS

Ecosystem Services Tools for Environmental Protection and Decision Making

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Roundtable on Aligning Tools and Decision-Making in
Ecosystem Services

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Environmental Policy & Decisions

- In representative government, continual need to understand, balance & communicate tradeoffs of environmental policies & decisions
- Benefit-cost analyses often required for decisions, particularly at national level
- Growing recognition of dependencies of societal & economic well-being on ecosystem services
- Shift in accountability from administrative process to environmental outcomes

Historic Inputs to Decision Making at the Federal Level

- Considerations
 - statutory & legal requirements
 - engineering options
 - sociocultural values & impacts
 - environmental benefits & economic costs
- Decision-support tools
 - ecological & human health risk assessment
 - benefit-cost analysis
 - social impact assessment
 - life cycle assessment
- Current states of the science & practice limit Agency's ability to quantify tradeoffs comprehensively

Developing the Science

- Ecosystem Service Research Program (ESRP) to provide the information and methods needed by decision makers to assess the benefits of ecosystem goods & services to human well-being
- Taking holistic, integrative view of problems & solutions
- Providing information most useful for evaluating alternative decision options & tradeoffs
 - quantifying ecosystem services & policy-relevant changes in their delivery
 - incorporating values society places on ecosystem services
 - developing decision support tools and delivery systems

ESRP Decision Support Tools

- Measures, monitoring designs, inventories & dynamics maps
- Models describing production functions & effects of decisions on service stocks & flows
- Methods for classifying, bundling & valuing
- Methods promoting development of markets
- Decision support platform
 - web-based
 - linking information, data models, analysis tools
- Attention to outreach & education
- Focus on places, problems and key ecosystems

Toward More Holistic Decisions

- Challenge as big as ecology & economics
- Agency (and others) aligning to ecosystem services as integrative objectives to preserve & enhance
- Partnerships will be key to success
 - World Resources Institute (WRI)
 - Gund Institute for Ecological Economics
 - Natural Capital Project
 - Resources for the Future (RFF)
 - National Geographic
 - National Ecological Observatory Network (NEON)
 - Dupont
 - Federal agencies
 - Academia