Title: Methods for Incorporating Ecosystem Services into Planning and Decision-Making

Goals: The purpose of this workshop was to delve into the ecosystem services assessment framework presented in the Federal Resource Management and Ecosystem Services (FRMES) Guidebook (https://nespguidebook.com). Currently, most presentations on the guidebook review these methods at a very high level. This workshop provided the opportunity to explore these methods in more depth, using participant exercises to enhance the discussion. Workshop leaders Lydia Olander and Dean Urban also wanted to understand if these types of presentations and exercises would be useful training tools for agencies and others as they start to explore ecosystem services assessments.

Presentations:

- “Workshop Introduction and Guidebook Overview”
  (Lydia Olander, National Ecosystem Services Partnership)
- “The Assessment Framework”
  (Dean Urban, Nicholas School of the Environment, Duke University)
- “Stakeholder Engagement”
  (Deb Whitall, USFS)
- “Means-Ends Diagrams: Linking Management, Project, or Policy Choices to Ecosystem Service Provision”
  (Christy Ihlo, Nicholas Institute for Environmental Policy Solutions, Duke University)
- “Benefit Relevant Indicators: Assessing Potential Ecosystem Service Benefits”
  (Lisa Wainger, University of Maryland Center for Environmental Science)
- “Integrating Social Value through Economic Valuation”
  (Robert J. Johnston, Clark University)
- “Non-Monetary Valuation: Multi-criteria Evaluation”
  (Dean Urban, Nicholas School of the Environment, Duke University)

All presentations will soon be available at https://nespguidebook.com.

Summary:
The guidebook’s assessment framework introduces a standardized, but customizable method for incorporating the value of ecosystem services into planning and decision-making processes. Following an introduction to the guidebook and a high-level overview of the assessment framework by Lydia Olander and Dean Urban respectively, presenters walked through key components of the assessment framework in depth, focusing on the aspects of the assessment that may be different from current planning and decision-making processes. For example:

- During “Stakeholder Engagement”, Deb Whitall discussed innovative engagement techniques used in the Forest Service’s Region 5 regional ecosystem services assessment. Deb also let participants experience one of the techniques she used to engage youth.
- Christy Ihlo’s presentation on “Means-Ends Diagrams: Linking Management, Project, or Policy Choices to Ecosystem Service Provision” demonstrated how these diagrams connect ecological processes to the provision of ecosystem services through a walk-through of the iterative processes used to create them, and then a small group exercise in which participants developed their own diagrams based on given examples.
For “Benefit Relevant Indicators: Assessing Potential Ecosystem Service Benefits”, Lisa Wainger built upon the examples used during the means-ends presentation, first discussing the types of social information that can adjust ecological information and render it more relevant to ecosystem services and then letting participants explore creating their own benefit relevant indicators using their already created means-ends diagrams.

Rob Johnston’s presentation “Integrating Social Value through Economic Valuation” gave a high-level overview of economic valuation, how it can be used in ecosystem services assessments, and common pitfalls in its application.

Finally, Dean Urban discussed using multi-criteria evaluation as an alternative to monetary valuation in ecosystem services assessments (“Non-Monetary Valuation: Multi-criteria Evaluation”). He used group discussion to emphasize some of the critical aspects of this method.

At the end of the workshop, workshop organizer Lydia Olander solicited feedback from participants on the usefulness of these presentations as training tools and how they could benefit organizations beyond federal agencies. Overall, the group agreed that presentations such as those used in the workshop would be a valuable asset to future trainings on ecosystem services assessment for both federal agencies and other organizations.

Workshop Participants:
Over 70 people registered for this workshop and approximately 60 attended the morning sessions. Participants represented a variety of both domestic and international sectors including U.S. federal government, universities, private consulting firms, and NGOs

Workshop Organizers:

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Qualifications: After a decade of research on ecological systems, Lydia Olander spent a year as an AAAS Congressional Fellow in the US Senate, and then transitioned to a career focused on integrating scientific and academic knowledge and expertise into the creation of effective solutions to critical environmental challenges. She directs the Ecosystem Services Program at the Nicholas Institute for Environmental Policy Solutions at Duke University and leads the National Ecosystem Services Partnership, a network of federal agencies, academic experts, NGOs, companies and many others interested in fostering improved collaboration, communication and consistency in ecosystem services approaches in the US. She was lead investigator on a Gordon and Betty Moore Foundation grant on Federal Resource Management and Ecosystem Services, which is coordinating a Community of Practice for federal resource management agencies and developed the Federal Resource Management and Ecosystem Services Guidebook.
Christy Ihlo
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Qualifications: Christy Ihlo works directly under Lydia Olander at Duke University's Nicholas Institute for Environmental Policy Solutions. She has a Master of Environmental Management from the Nicholas School of the Environment at Duke University and has been significantly involved in the development of the Federal Resource Management and Ecosystem Services Guidebook.