



NatCap Annual Meeting & Training
March 26 - 28, 2014
Stanford University, Palo Alto, CA

LONG AGENDA



indicates half or more of this session includes hands-on component

(Please bring InVEST and/or RIOS installed along with a GIS software on your PC.

Alternatively, we recommend making arrangements to share with another participant.)

Wednesday, March 26*, 2014

**All events on Wednesday will take place in Paul Brest Hall (except for the poster session at 5:30pm).*

Welcome and Introductions

1:00pm - 1:20pm

Mary Ruckelshaus and Gretchen Daily welcome everyone to the Annual Meeting.

Opening Plenary

1:30pm - 2:20pm

Introduction from Mary Ruckelshaus and Gretchen Daily about The Natural Capital Project, who we are, and what we do. This will be followed by an introduction to our approach and tools (InVEST and RIOS) from our lead scientists, Becky Chaplin-Kramer, Anne Guerry, and Bonnie Keeler.

NatCap Partner Panel

2:30pm - 3:20pm

Four short presentations by some of the Natural Capital Project's partners: Chantalle Clark from the Coastal Zone Management Authority and Institute in Belize, Jorge Valenzuela and Alvaro Motaña from CECAPAN in Chile, Juan Sebastian Lozano from The Nature Conservancy in Colombia, and Carrie Chennault from Iowa State University, followed by Q&A.

Tradeoff! Game

3:30pm - 4:50pm

Gregg Verutes and Amy Rosenthal will host a fun, interactive exercise that demonstrates how spatial planning decisions are made. Play in teams to win prizes!

Wrap-up & Announcements**5:00pm - 5:20pm****Poster Session and Happy Hour****5:30pm - 7:00pm**

Food and drinks will be provided as we peruse the posters presented by Annual Meeting attendees on their projects applying NatCap's methods to various problems around the world. The poster session and happy hour will take place in Herrin Hall, a 15 minute walk away. NatCap staff will walk you over.

Thursday, March 27, 2014**Installing InVEST and RIOS****8:00am - 8:20am****Paul Brest Hall West**

Kathryn Glowinski and the NatCap software team will help those who need help installing InVEST and RIOS and provide a quick intro to using the software.

Announcements and Overview**8:30am - 9:20am****Paul Brest Hall West**

Session leads will offer a preview of the day's events.

Coastal and Marine Spatial Planning**9:30am - 12:20pm****Paul Brest Hall East**

Approximately 150 countries around the world have coastlines, and many of them are currently working to obtain additional benefits from their Exclusive Economic Zones (EEZ's) while preserving the natural capital that is the foundation for those benefits. Coastal and marine spatial planning (CMSP) promises to do just that. But it isn't easy. Thus, there is great demand for credible, practical tools for marine planning, for sharing the lessons learned in various CMSP processes, and for telling success stories. This session will focus on how ecosystem service approaches can improve CMSP, with examples from NatCap's work in Belize, British Columbia, and New England, as well as opportunities for participants to discuss their experiences. We will focus on the process of CMSP rather than on particular InVEST models or their use. Feedback from participants at this session will help guide NatCap tools currently under development.

Back to the Future: Scenario development for ecosystem services**9:30 - 10:50am****Paul Brest Hall West**

This session will teach basic concepts of scenario development using examples from Belize and Tanzania. Attendees can expect to become familiar with NatCap scenario development tools, including our Scenario Development Guide, Scenario Generator and InSEAM (our online map annotation prototype). This session will conclude with hands-on activities using these tools.

Latest NatCap Approaches and Tools (Part I)**9:30 - 10:50am****S. Mark Taper Conference Center Room 123**

This session will highlight several of NatCap's newest tools and approaches. We will introduce InVEST's new batch-processing capabilities, which allow users to run hundreds of scenarios and to investigate new scenarios, as well as new approaches to assessing uncertainty and to developing optimized scenarios. We will also feature some soon-to-be-released models, including a non-timber forest product (NTFP) model and the GLOBIO model for assessing human impacts on biodiversity, along with improvements to InVEST sediment and nutrient retention models. Lastly, attendees can learn about NatCap efforts to link InVEST and RIOS with other models including SWAT (in India and Kenya), Climate Wizard and WaterWorld.

Introduction to Core InVEST Freshwater and Terrestrial Models**11:00am - 12:20pm****Paul Brest Hall West**

This session will provide an overview of all the InVEST freshwater and terrestrial models, including where to find documentation and case study examples. For three InVEST models (Carbon, Habitat Quality, and Annual Water Yield), we will provide a brief description of the theory, and explore inputs, outputs, and 'real-life' applications. Attendees are invited to get hands-on experience with these models at the 'Sandbox' sessions or during the Friday session, Hands-on InVEST: Carbon, water, and habitat models.

Latest NatCap Approaches and Tools (Part II)**11:00am - 12:20pm****S. Mark Taper Conference Center Room 123**

This session will familiarize participants with new models and techniques focused on (though not limited to!) coastal and marine ecosystem services by illustrating their use in different geographies and decision contexts. We will begin with demonstrations of the newly-released InVEST Blue Carbon and Recreation models, with examples from study sites in Texas and British Columbia. This will be followed by a demonstration of new coastal resilience tools built around the InVEST Coastal Vulnerability model. The session will conclude with a sneak-peek at upcoming NatCap projects and emerging marine applications.

Lunch

12:30pm - 1:20pm

Designing Investments in Watershed Services with RIOS

1:30pm - 4:20pm

Paul Brest Hall East



This session will provide an overview of the conceptual basis and functionality, along with examples from different applications using RIOS (Resource Investment Optimization System). RIOS is a tool that combines biophysical, social, and economic data to help users identify the best locations for protection and restoration activities that maximize the ecological return on investment within the bounds of what is socially and politically feasible. The session will conclude with a hands-on exercise to get participants started using RIOS to monitor the effectiveness of watershed investments in Latin America and beyond.

Getting Your Feet Wet: Introduction to the science and application of marine InVEST models

1:30pm - 2:50pm

Paul Brest Hall West

This session will introduce participants to the science underlying the core marine InVEST models. We will share how these models have been applied in specific locations and offer participants a chance to ask questions and discuss how specific ecosystem service models and applications are relevant to their work. The first part will offer participants an introduction to several NatCap marine application sites (New England, Belize and Galveston) and core models (e.g., renewable energy, aesthetic quality, habitat risk assessment, fisheries, and coastal protection). A plenary discussion and breakout groups tailored to the participants' interests will follow. During this time, participants can explore how these models and the science underlying them are applicable to their own projects. Opportunities for hands-on experience with these models include the 'Sandbox' sessions or during Friday's "Hands-on InVEST: Marine models used in Belize for coastal zone management" session.

Sandbox Session (Day 1)

1:30pm - 4:20pm

S. Mark Taper Conference Center Room 123



Sandbox sessions are a chance to work one-on-one or in small groups with NatCap model developers, software engineers and policy specialists. Bring your own data, questions and project information, or try our new hands-on exercises developed for InVEST and RIOS at your own pace.

Ecosystem Service Valuation

3:00pm - 4:20pm

Paul Brest Hall West

This session will introduce monetary and non-monetary options and valuation methodologies. We will offer examples from NatCap applications and tools including renewable energy in New England and new valuation functionality to the InVEST scenic quality (unobstructed views) model. There will also be ample time for your questions and discussion.

Outside Speaker Panel

4:30 - 5:20

Paul Brest Hall West

Sarah Sim from Unilever, Rafael Acevedo-Daunas from the Inter-American Development Bank, and Ben Packard and Jon Fisher from The Nature Conservancy will be speaking. Steve McCormick and Tom Miller will moderate.

Friday, March 28, 2014

Announcements and Overview

8:30am - 9:20am

Paul Brest Hall West

Session leads will offer a preview of the day's events.

Where the Rubber Meets the Road: Accounting for ecosystem services in infrastructure permitting, impact assessment and mitigation decisions

9:30am - 12:20pm

Paul Brest Hall East

This session will introduce NatCap's newest tools and applications relating to impact assessment and mitigation of infrastructure development, including examples from Colombia and Peru and our collaboration with the Inter-American Development Bank. Ask questions and get feedback from NatCap experts about applying our approaches and tools in your own related projects. Get practical experience using InVEST models to quantify development impacts and assess mitigation options with a new hands-on exercise.



InVEST in Practice

9:30am - 10:50am

S. Mark Taper Conference Center Room 123

This session will showcase different ways InVEST has been put into practice around the world. There will be short presentations by managers who have experience using InVEST, followed by a question, answer, and discussion period. Attendees can expect to have a better understanding of the nuts and bolts when applying InVEST and the NatCap approach in real-world planning and decision-making.

Hands-on with InVEST: Marine models used in Belize for coastal zone management

9:30am - 10:50am

Paul Brest Hall West

This session will work through a hands-on exercise that includes real data, scenarios and models from NatCap's application in coastal Belize. Participants will have the opportunity practice using their InVEST and GIS software on their own computers (or share with a fellow attendee). The exercise will include data pre- and post-processing as well as interpreting, visualizing and communicating model results. Participants interested in this session are strongly encouraged to attend Thursday's "Getting Your Feet



Wet” session for model introduction and theory.

The Sausage-Making Session: How InVEST applications are made

11:00am - 12:20pm

S. Mark Taper Conference Center Room 123

This interactive session will walk through the NatCap approach, highlighting examples of how each step gets accomplished. There will also be time for discussion and brainstorming around key components (e.g., data collection, stakeholder engagement, etc.) plus monitoring and evaluation of an ecosystem services assessment. Examples will include both successes and challenges to learn from, along with sufficient time for robust debate and discussion.

Hands-on with InVEST:

Carbon, water, and habitat models



11:00am - 12:20pm

Paul Brest Hall West

In this session, participants will have the opportunity to run the InVEST carbon, water yield, and habitat models on their own computer using sample data from a watershed in Minnesota. We will begin with a brief overview of each model and the sample land-use scenarios. Participants are encouraged to download InVEST and the sample data on their laptops before the session so we can jump right into running models and exploring results. Expert trainers will be on hand to help with these hands-on exercises. At the end of the session participants will understand how to load data into InVEST, run a few of the most common InVEST models, and view results. Participants interested in this session are encouraged to attend Thursday’s “Introduction to Core InVEST Freshwater and Terrestrial Models” which will offer a thorough introduction to these models and the theory behind them.

Lunch

12:30pm - 1:20pm

Hazard Risk Reduction: The science and application of coastal ecosystem service models for informing climate adaptation and coastal hazard planning

1:30pm - 4:20 pm

Paul Brest Hall East

This session will identify the questions we are all being asked about the role of coastal ecosystems in hazard risk reduction and climate adaptation. We will also share the science and tools NatCap has developed with our partners to address these questions at several locations in the U.S. and around the world. Finally, participants will have the opportunity to run InVEST (including the coastal protection model) and assess the role that habitats can play in hazard risk reduction.

Processing Data: Preparing inputs and interpreting outputs

1:30pm - 2:50pm



S. Mark Taper Conference Center Room 123

In this technical session, we will provide tips, techniques and considerations for preparing a variety of data as inputs to InVEST. We will also highlight common data problems, look critically at model results, and think about how outputs can be used as part of a broader analysis. A hands-on exercise using an InVEST freshwater model will be offered to demonstrate some of these topics. This session will also cover some terrestrial and freshwater helper tools NatCap has developed, as well as a brief introduction to calibration and validation.

Sandbox Session (Day 2)

1:30pm - 4:20pm



S. Mark Taper Conference Center Room 123

Sandbox sessions are a chance to work one-on-one or in small groups with NatCap model developers, software engineers and policy specialists. Bring your own data, questions and project information, or try our new hands-on exercises developed for InVEST and RIOS at your own pace.

Visualizing and Communicating Results

3:00pm - 4:20pm

S. Mark Taper Conference Center Room 123

Great, you've run InVEST! Now what? You still need to communicate that information to decision makers in a way that is both easy to understand and meaningful to them. This session will provide participants with tips for effective design and communication, including understanding your audience, framing your decision context, synthesizing information, and dealing with uncertainty. We will also offer suggestions on how to make effective charts and graphs, as well as beautiful and intuitive maps. Participants are encouraged to bring their own maps and graphs with them for a friendly group critique and to receive suggestions for improvement.

Wrap-up and Questions

4:30pm - 5:00pm

Paul Brest West

Bringing the conference to a close, Mary Ruckelshaus and the NatCap lead scientists will open the floor for Q&A. Ask us anything!

