Operationalizing Cultural Ecosystem Services for Political Decision-Making

Bessie Schwarz
Yale University, Bessie.schwarz@yale.edu

Follow this and additional works at: https://cedar.wwu.edu/ssec

Part of the Environmental Studies Commons, Political Science Commons, and the Terrestrial and Aquatic Ecology Commons

Schwarz, Bessie, "Operationalizing Cultural Ecosystem Services for Political Decision-Making" (2014). Salish Sea Ecosystem Conference. 94.

This Event is brought to you for free and open access by the Conferences and Events at Western CEDAR. It has been accepted for inclusion in Salish Sea Ecosystem Conference by an authorized administrator of Western CEDAR. For more information, please contact westerncedar@wwu.edu.
Operationalizing Cultural Ecosystem Services for Political Decision-Making

Testing Value Maps on the Northern Olympic Peninsula

Bessie Schwarz
Yale School of Forestry and Environmental Studies

University of Washington Author: Dr. Kelly Biedenweg • Yale University Advisor: Dr. Karen Hebert
Presentation for Salish Seas Conference • 5.2.14
Cultural Ecosystem Services for political decision-making
Outline

1. CES for decision making
2. Value mapping demo
3. Question
4. Methods
5. Results
6. Implications for management
“...non-material benefits people obtain from ecosystems...that demonstrate a significant relationship between ecosystem structures and functions specified in the biophysical domain and the satisfaction of human needs and wants specified in the medical/psychological/social domain.”

- Daniel et al 2012 as adapted from Millennium Ecosystem Assessment
Value Maps
Diverse Stakeholders

- Logger
- Female
- Long time resident
- Native American
- Young

Stakeholder Values

Distribution of Meaningful Places on the Olympic Peninsula

Density Distribution of Values

Decision-Makers

Management plan or Policy Decision
WHERE ARE CULTURAL ECOSYSTEM SERVICES IN
POLITICAL DECISION-MAKING, AND
CAN VALUE MAPS INCREASE THE
CONSIDERATION OF CULTURAL ECOSYSTEM SERVICES?
Methods

- Site: Northern Olympic Peninsula
- Sample: ~85% of politicians for the region
  - Puget Sound Partnership Leadership Council
  - County Commissioners
  - Mayors
  - Forest Service Manager
- Case Example Decision: Shoreline Master Program (SMP)
- Conceptual Content Cognitive Mapping (Kearny and Kaplan)
- Pre/Post with visualization
Results

Full Mental Model

- Number of Items - 26.5
- Change in size of sorts after exposure - + 2.18 (p < 2.2e-16)

Budgetary concerns, personal legacy, Politics, tangible ecosystem services partnership with peer organizations
Cultural Ecosystem Services

In Considerations:

“beauty”, “recreation”, “spiritual”, “for future generations”

In Conversation:

“I think people share the same value, which has to do with the beauty of, what the protection of this place that...see if they can be in front of their house, in front of their town.”

“This should be a place for people to live and enjoy.”

“Nowadays, it’s much more peaceful in the Quinault Valley, so how do I weigh that?”
RESULTS

Cultural Ecosystem Services

Before/After Change in Presence:

**Before:** mean = 0.048

**After:** mean = 0.059

**Difference:** mean difference = 0.0108, Relative difference = +1.01%, p-value = 0.045

Before/After Change in Prioritization:

**Difference:** relative difference = 0%, p-value = 0.012
In Conversation:

“The purpose of the SMP is to “...preserve water uses and water dependent uses for all the state’s citizens... water belongs to the citizens of the state and all of them have an equal right to use it an enjoy it.”

In Considerations:

“public reaction”, “Shoreline property owners”, “Developers”, “tribes”, “All citizens of the state”, “timber industry considerations”
RESULTS

Before/After Change in Presence:

Before: mean = 0.1048387
After: mean = 0.1263441
Difference: M difference = 0.0215, Relative difference = 1.5%, p-value = 0.0045

Before/After Change in Prioritization:

Before: mean = 0.438
After: mean = 0.548
Difference: Relative difference = 1.5%, p-value = 0.01356

Written Decision Changes:

Half of the politicians include considerations of stakeholders in their decision after the exercise
Do Maps and Values make Cultural Ecosystem Services more actionable and visible to politicians?
Discussion

Do maps and values make Cultural Ecosystem Services more actionable and visible?

- Gap in CES academia mirrored in political decision-making
- Cultural Ecosystem Services are recognized, but are not large part of decision-making process
- Maps have a significant but minimal effect
- People as proxy?
- Future research
  - Experiments with longer exposure, a control, bigger sample size and
Acknowledgements

- Yale Institute for Biospheric Studies
- The Center for Urban Waters, UW-Tacoma
- Dr. Rebecca McLain and David Banis, PSU
- Dr. Karen Hebert, Yale University
- Carpenter Sperry Fund
- Ted and Calvert Armbrecht
Questions?

Contact:
Bessie.Schwarz@Yale.edu | @Bessie.Schwarz

Visualization:
http://bit.ly/1gb8t8P
LANDSCAPE VALUES

AESTHETIC — I value this place for the scenery, sights, smells or sounds.

ECONOMIC — I value this place because it provides income and employment opportunities through industries such as forest products, mining, tourism, agriculture, shellfish, or other commercial activity. [On your worksheet, please describe the kinds of economic services this place provides.]

ENVIRONMENTAL QUALITY — I value this place because it helps produce, preserve, and renew air, soil and water or it contributes to healthy habitats for plants and animals.

FUTURE — I value this place because it allows future generations to know and experience it as it is now.

HEALTH — I value this place because it provides a place where I or others can feel better physically and/or mentally.

HERITAGE — I value this place because it has natural and human history that matters to me and it allows me to pass down the wisdom, knowledge, traditions, or way of life of my ancestors.

HOME — I value this place because it is my home and/or I live here.

INTRINSIC — I value this place just because it exists, no matter what I or others think about it or how it is used.

LEARNING — I value this place because it provides a place to learn about the natural environment.

RECREATION — I value this place because it provides outdoor recreation opportunities or a place for my favorite recreation activities. [On your worksheet, please describe the kinds of recreation you do in this place and whether you value it because it has recreational amenities — campgrounds or other services — or, alternatively, because it does not have amenities — primitive.]

SOCIAL — I value this place because it provides opportunities for getting together with my friends and family or is part of my family’s traditional activities. [On your worksheet, please describe the kinds of activities that you or your family do in this place.]

SPIRITUAL — I value this place because it is sacred, religious, or spiritually special to me.

SUBSISTENCE — I value this place because it provides food and other products to sustain my life and that of my family. [On your worksheet, please describe the kinds of subsistence services this place provides.]

WILDERNESS — I value this place because it is wild.
Value Maps

Are these just pretty maps?
Cog. Map Broken Down

“Salmon”

“My reputation”; “Do we have the money for this?”

“Real-estate and Development Community”

“How will the next generation experience this place”
PHOTOS of people doing cog map
Daniels et al. 2012 definition

Qualitative, content Analysis of items and

Quantitative analysis

Compare pre and post test

“Salmon”

“My reputation”; “Do we have the money for this?”

“Real-estate and Development Community”

“How will the next generation experience this place”
References


