Conflict and Fragmentation in Land Management

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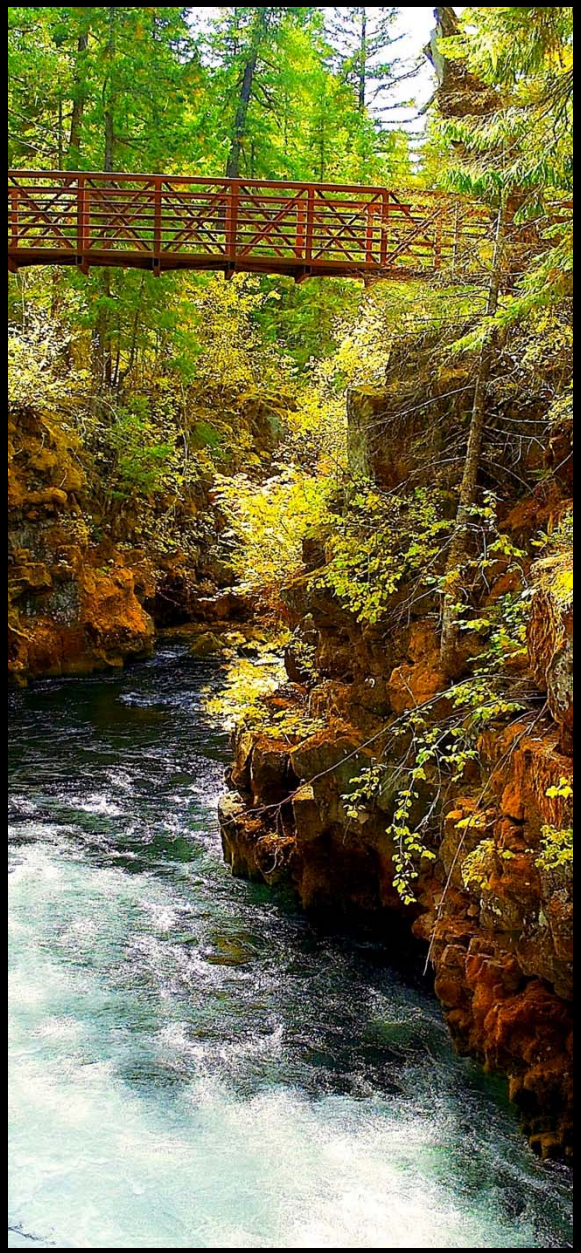
A Community on Ecosystem Services
December 9, 2014

The Issues

The Places



The Approach

The Issues

How do we manage for a sustainable flow of ecosystem services across land ownerships at scale?

How can we make landscape scale restoration happen?

Landscape Ecology

The study of landscape patterns and ecological processes, and how these patterns and processes change over time.

"More than any other discipline, Landscape Ecology bridges the gap between science and practice, between question-driven research and problem-driven applications."

--John Wiens

Ecosystem Services

The benefits humans receive from nature.

Photo credit: Salmon River Mountain Press


Landscape Ecology
Ecosystem Services
Frameworks

Fragmentation

Many neighbors

Photo credit: Kansas State University – Lab for Landscape and Conservation Ecology

Biophysical Fragmentation

Differences in management across the landscape

Photo credit: Reading the Washington Landscape; Lomakatsi.org; City of Ashland

Social/Relational Fragmentation

Photo credit: US Forest Service

- Are biophysical fragmentation and social fragmentation connected?
- How does this relate to conflict around issues of land management?
- How might we better understand the ways that the social landscape interacts with the biophysical landscape?

The Places

Comparative Approach

Eastside Forest –
Blue Mountains

Westside Forest –
Rogue River Basin

Photo credit: USFS.gov

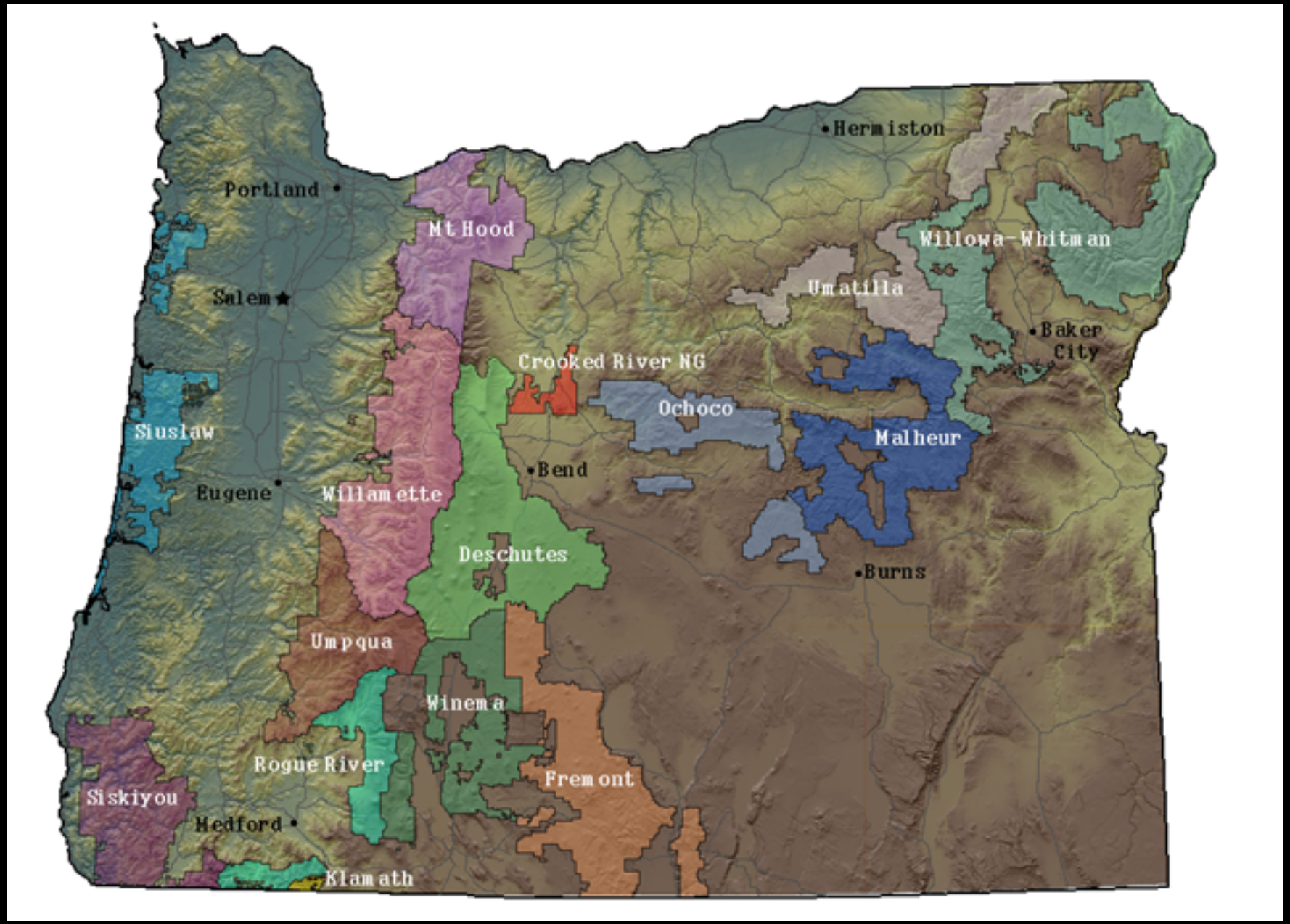
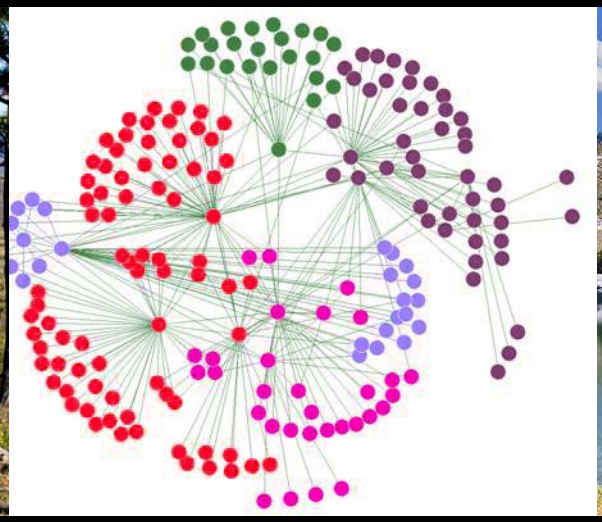


Photo credit: University of Oregon Libraries

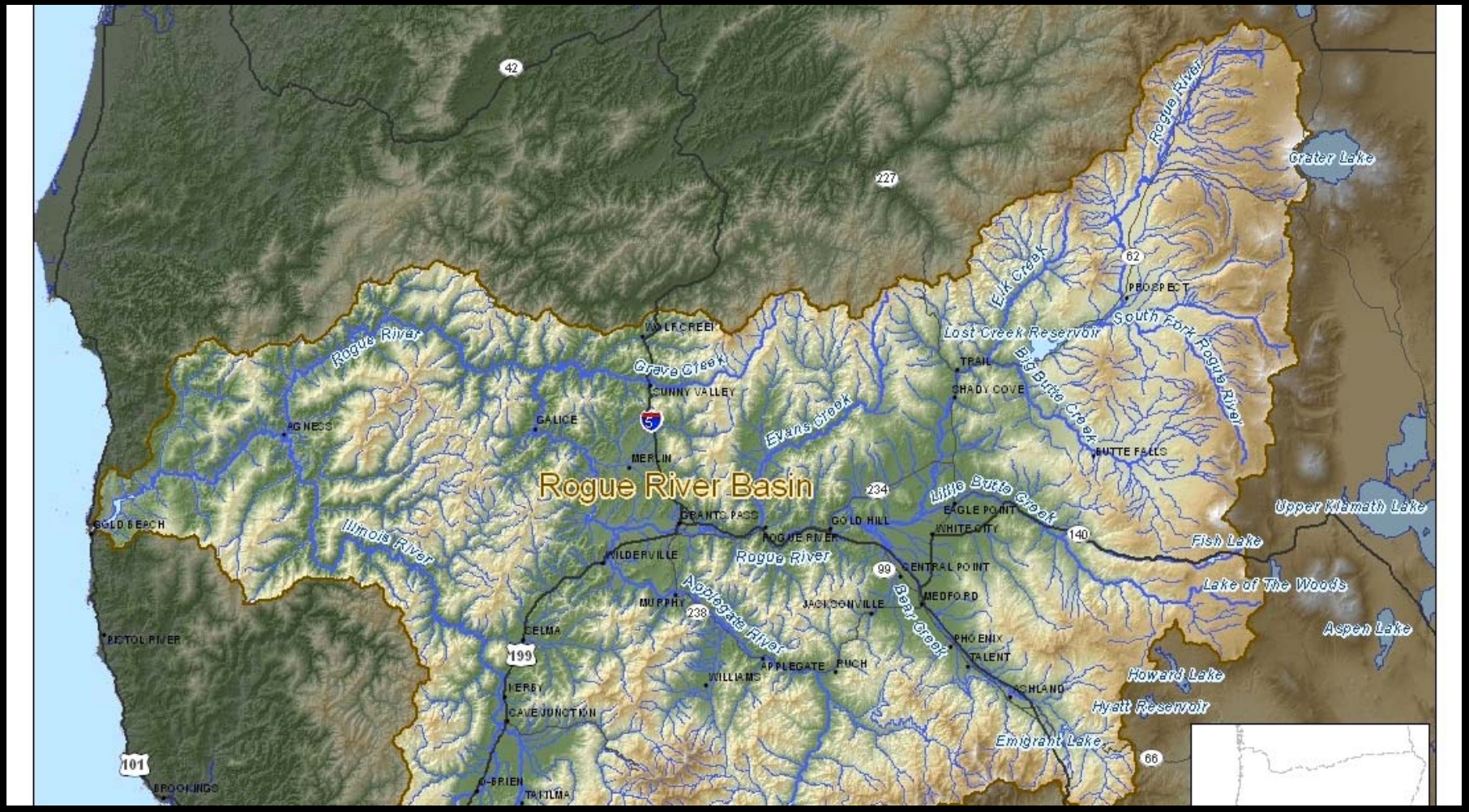
The Blue Mountains Stewardship Project

Contact: Rebecca McLain, Institute for Sustainable Solutions at Portland State University; mclainrj@pdx.edu



Using social networks to build capacity on the ground in diverse landscapes

Rogue River Basin Stewardship Project



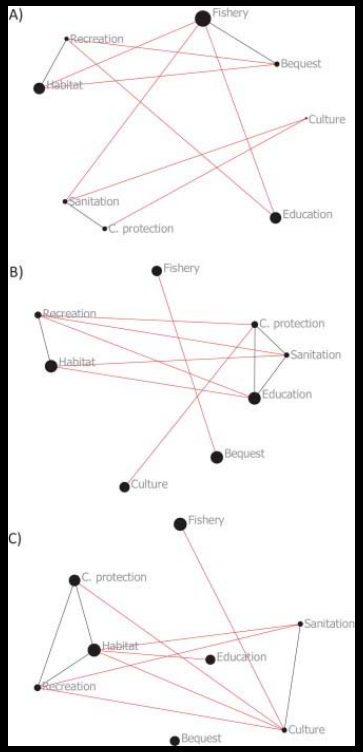
1. “Mapping” Ecosystem Services Preference

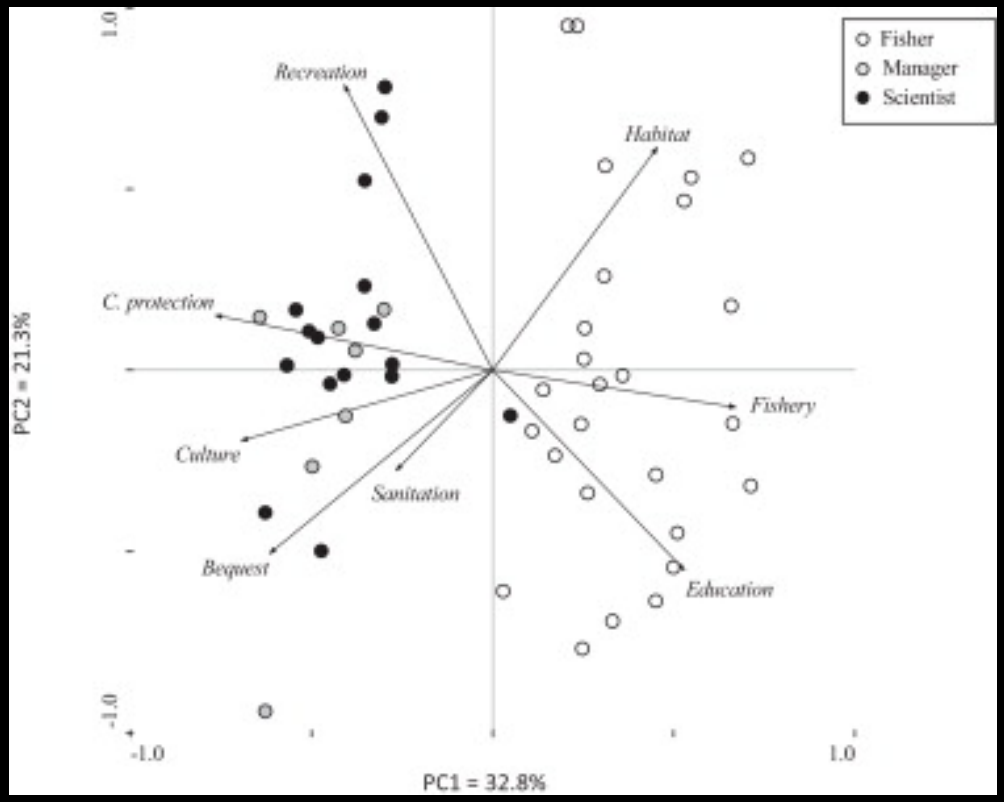
1. Understanding the Social Landscape

1. Prioritizing action – Social connectivity + ecological data

Social Mapping – Ecosystem Services Preferences

Network diagrams showing interactions among ES prioritized by stakeholder group. Red = tradeoff and black = synergies

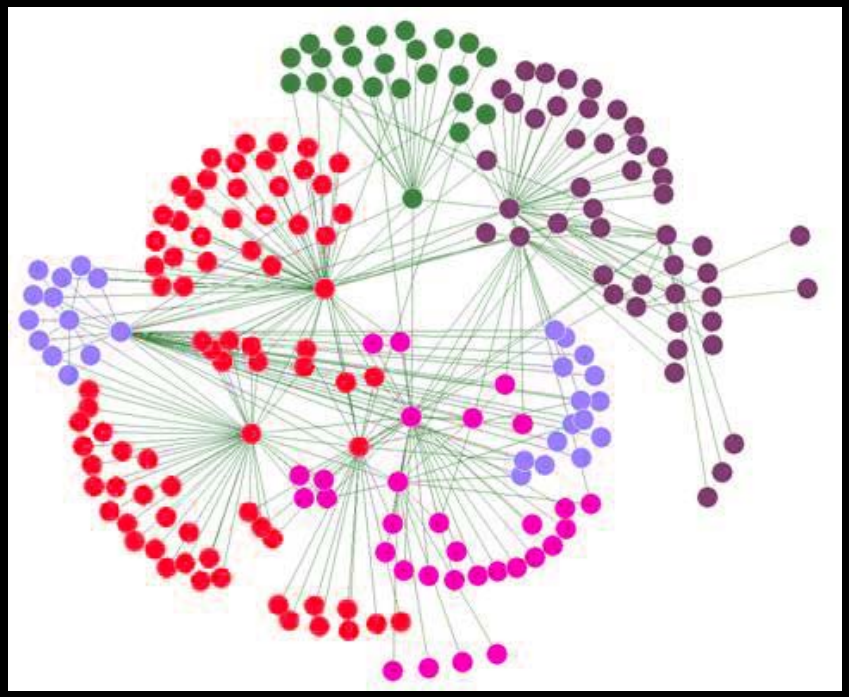




Variation in stakeholder groups based on ecosystem services values

Citation: Hicks et al. (2013). Synergies and tradeoffs in how managers, scientists, and fishers value coral reef ecosystem services. *Global Environmental Change.* 23, 1444-1453

Social Network Analysis



Structural and relational approach to describe and analyze the characteristics of patterns of relationships that make collaborative efforts more or less effective at solving natural resource management problems

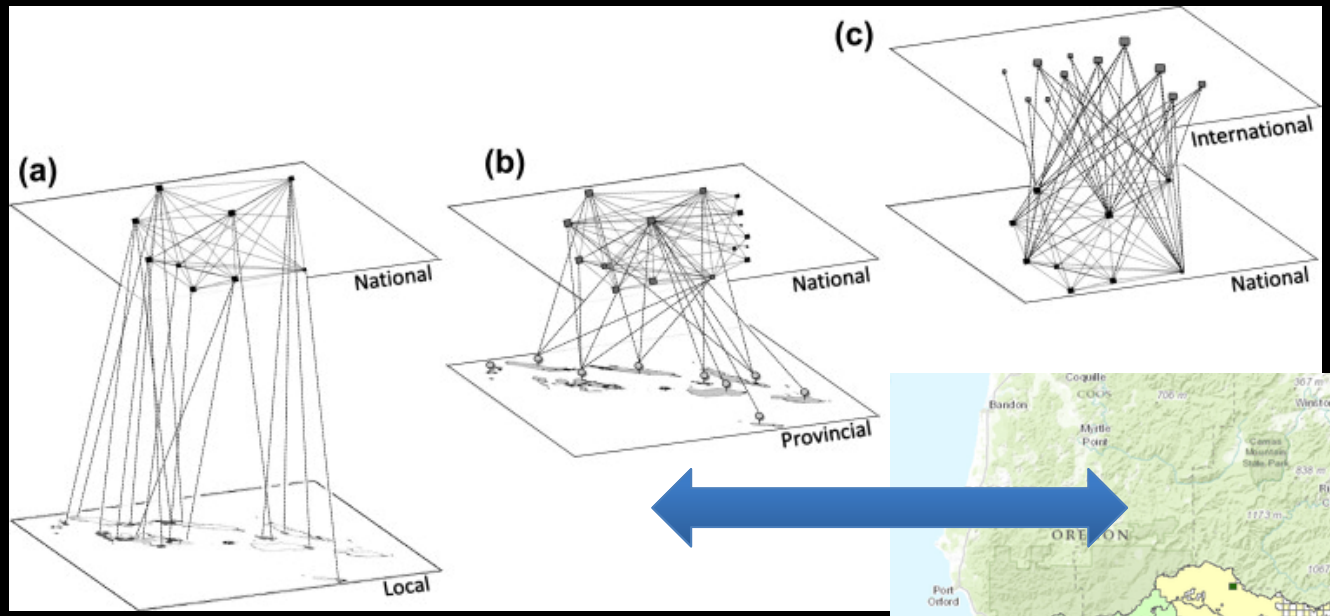
Citation: Mills et al. (2014) Linking regional planning and local action: Towards using social network analysis in systematic conservation planning. *Biological Conservation.* 169, 6-13.

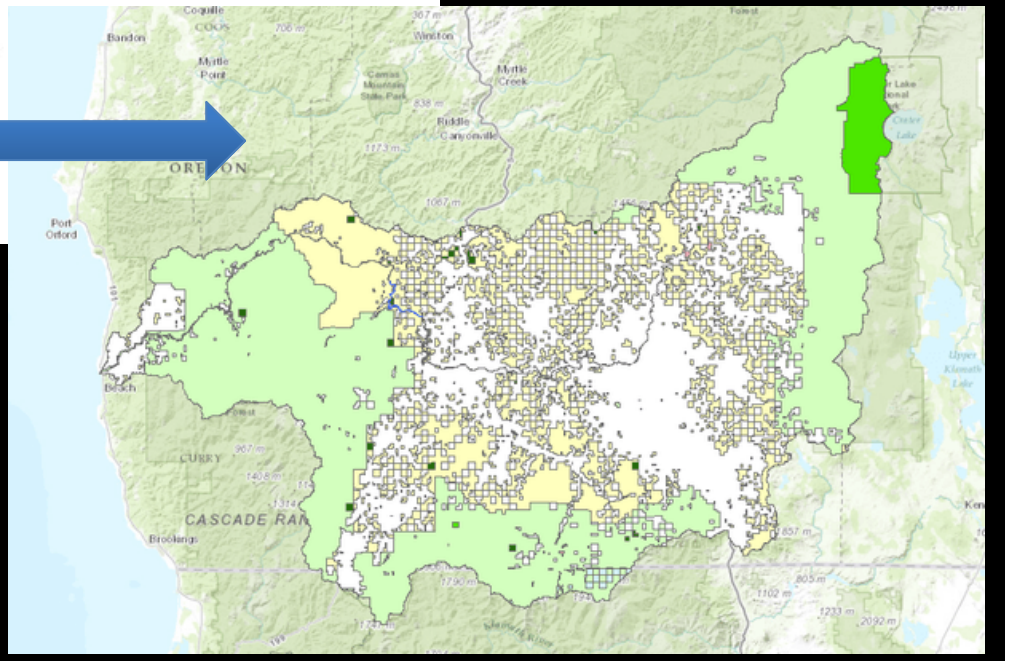
Characterize. Describe. Identify.

The “Sacred Grove” – Singapore Garden Festival 2014

Photo credit: Land8

Social and Biophysical Mapping -- Ties



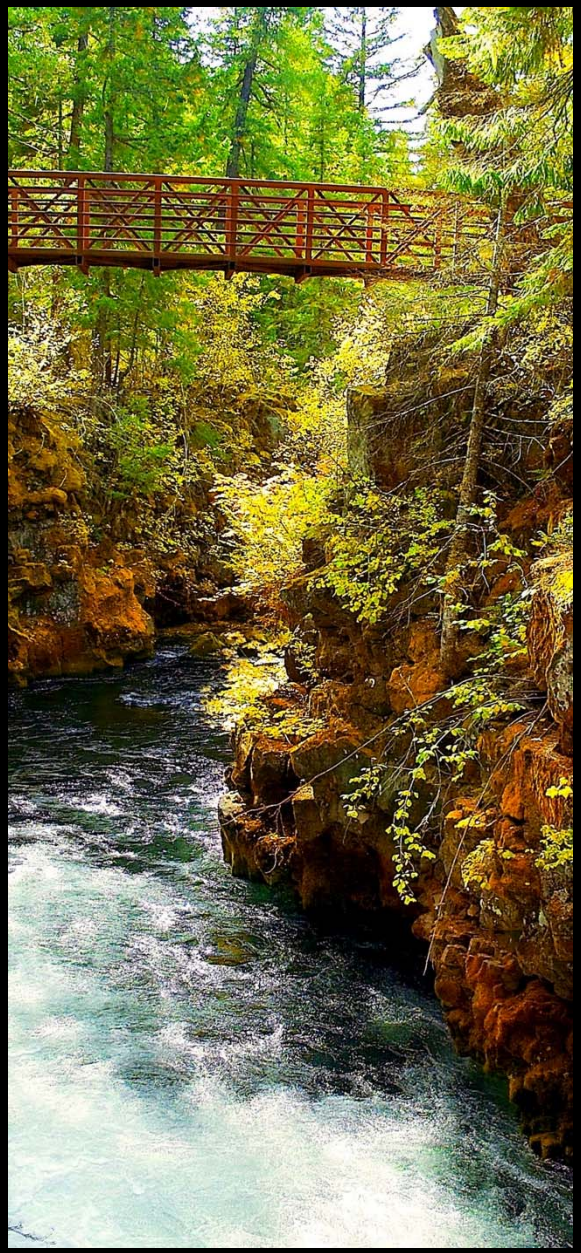


Citation: Mills et al. (2014) Linking regional planning and local action: Towards using social network analysis in systematic conservation planning. *Biological Conservation. 169, 6-13*

Map credit: Data Basin 2014

The Issues

The Places



The Approach

Acknowledgements

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