



for the greatest good



blue mountains FOREST RESILIENCY PROJECT

BLUE MOUNTAINS RESTORATION STRATEGY

Science Camp Unplugged

An experiment in scientist-manager
collaboration

Ayn Shlisky – Blue Mountains Restoration Strategy Team Lead

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The Experiment



The Problem:

- Solving big complex problems is hard.
- Ground-breaking makes it harder.
- Science is abundant and variable.
- It's easy to get lost in the weeds.

Hypotheses:

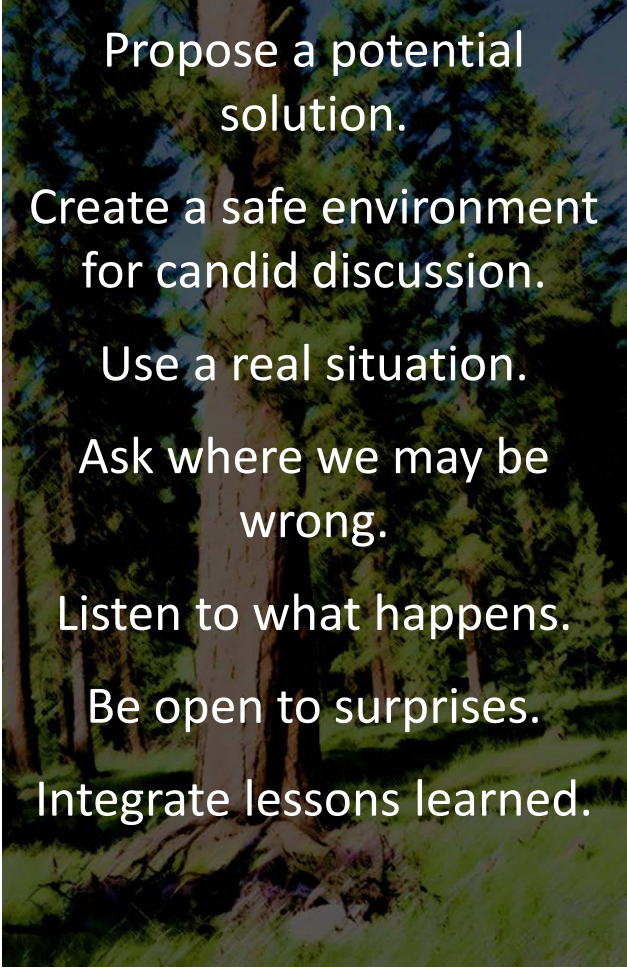
- Opening up ideas for discussion will bring clarity of thought.
- Productive discussions start with creating a venue.
- Invite a bunch of smart scientists to get together, give them a big gnarly problem, and you will walk away wiser.



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Methods



Propose a potential solution.

Create a safe environment for candid discussion.

Use a real situation.

Ask where we may be wrong.

Listen to what happens.

Be open to surprises.

Integrate lessons learned.

- 
- Bill Aney
 - Scott Batchelar
 - Karen Bennet
 - Kori Blankenship
 - Paul Boehne
 - Scott Batchelar
 - Mike Brown
 - Pete Caligiri
 - Gunnar Carnwath
 - Ray Davis
 - Tom Demeo
 - Jenifer Ferriel
 - Cheryl Friesen
 - Amy Gowan
 - Miles Hemstrom
 - Kerry Kemp
 - Paul Hessburg
 - Michael Jennings
 - Andrew Larson
 - Neil McCusker
 - Kim Mellen-McLean
 - Sabine Mellmann-Brown
 - Jay Noller
 - Nathan Poage
 - Glen Sachet
 - Ayn Shlisky
 - Mike Simpson
 - Tom Spies
 - Brian Spradlin
 - Nicole Vaillant
 - Barb Wales
 - Darcy Wesman

What is the big gnarly problem?

44

R. Haugo et al./Forest Ecology and Management 335 (2015) 37–50

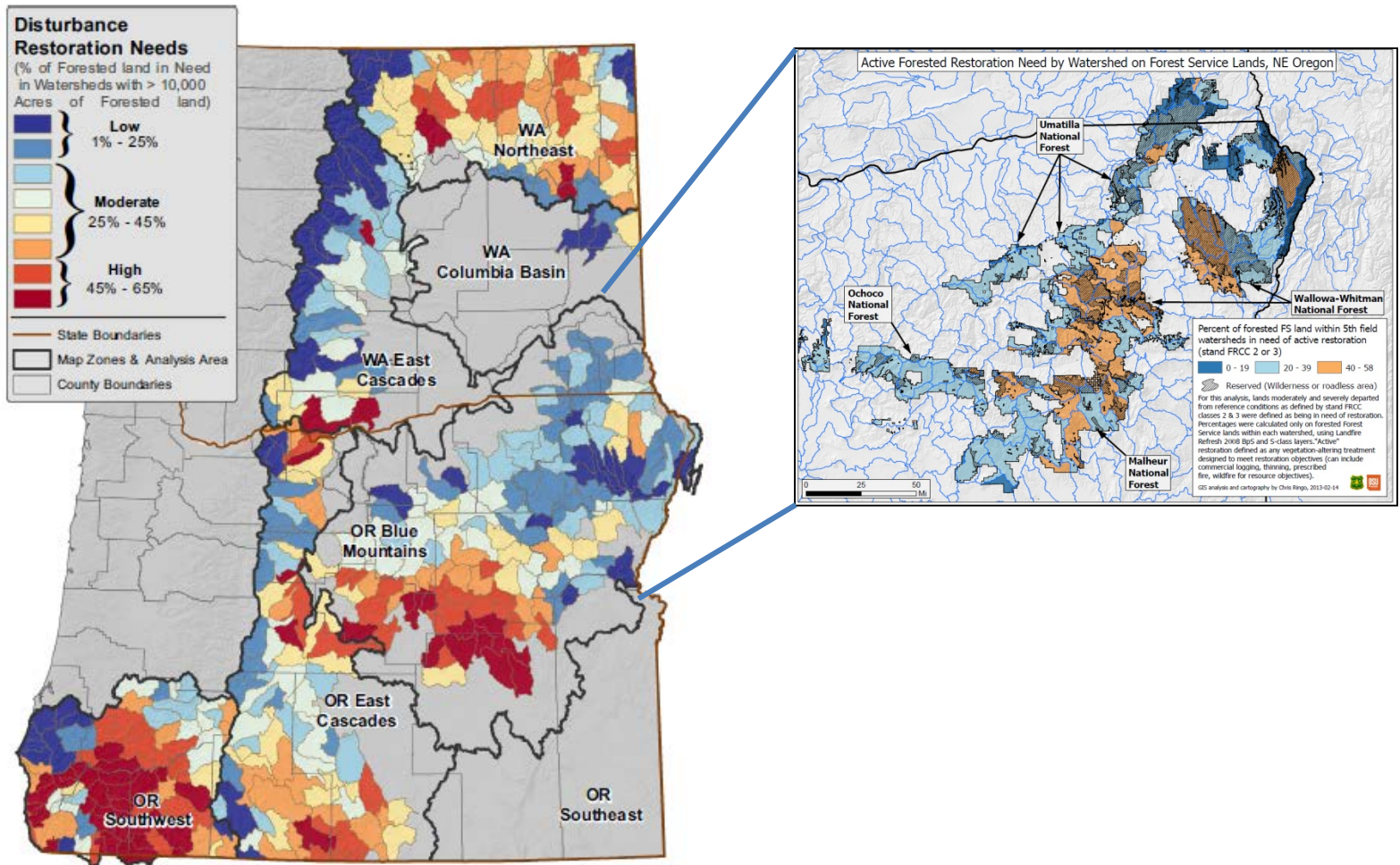
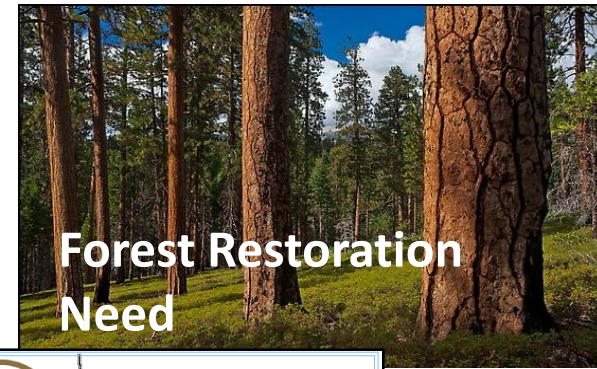


Fig. 4. All disturbance restoration needs as a percentage of forests within 10-digit/5th level hydrologic unit watersheds. Includes the thin/low fire, opening/high fire, overstory thin, thin/low fire + growth, and other disturbance + growth transitions. Within Map Zone labels WA = Washington and OR = Oregon. See Appendix B.4 for restoration need summaries per watershed.

One Solution

Forest Resiliency Project

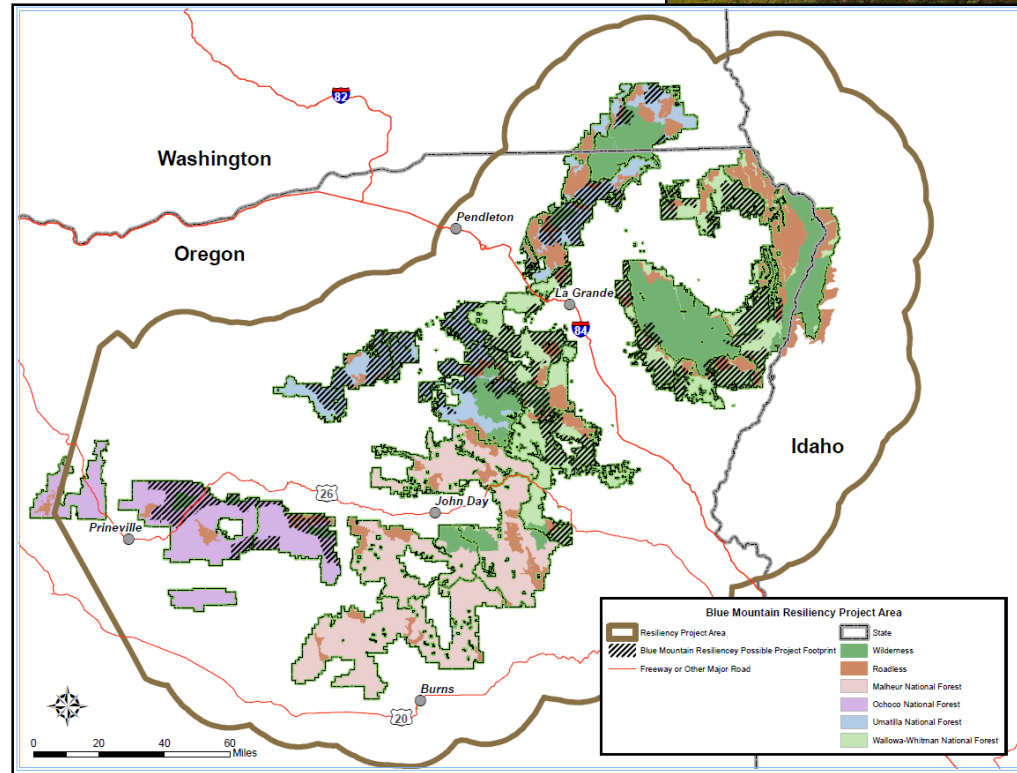


Forest Restoration
Need

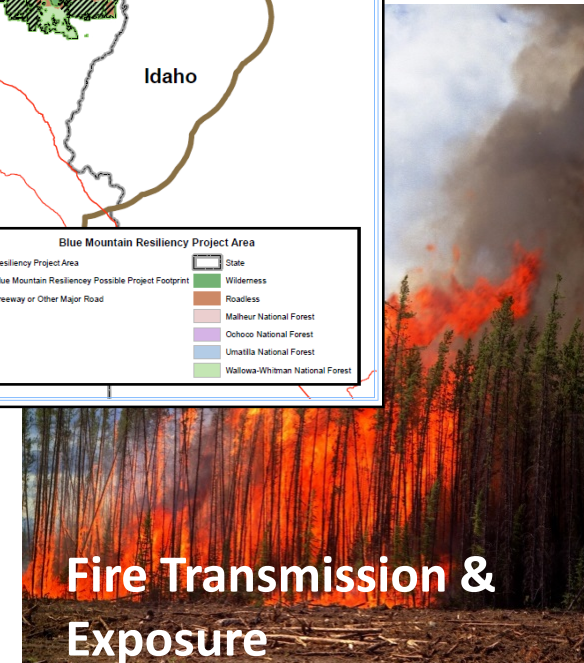
Geographic scope
consistent with the
need

Focuses on a narrow
purpose to navigate
complex issues under a
short timeline.

Engages internally and
externally on both
planning and needs for
implementation.



Climate Change



Fire Transmission &
Exposure

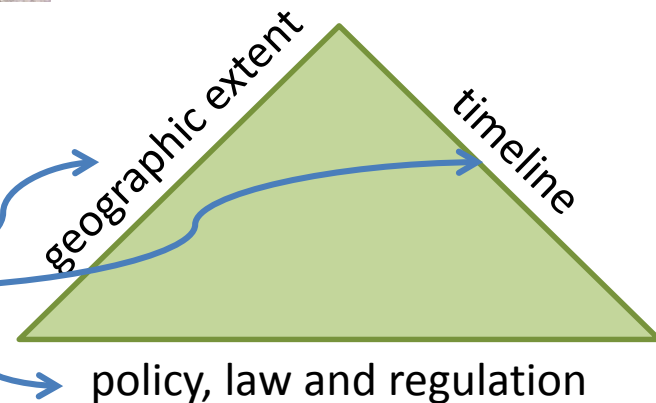
Forest Resiliency Project Purpose

- Actively restore *dry forests* on three Blue Mountains National Forests (Ochoco, Umatilla, Wallowa-Whitman)
- Strategically treat fuels to support the use of fire at landscape scales on *all forest types*.



- Prepare an EIS that leads to implementable decisions

- different than the norm
- the same, with new perspectives



Forest Resiliency

Project

Proposed Action

- Approximately 610,000 acres of thinning and prescribed fire treatments across the Ochoco, Umatilla, and Wallowa-Whitman National Forests in areas with the greatest restoration need.
- Proposed treatments by forest include:
 - 120,000 acres of treatment on the Ochoco NF
 - 210,000 acres of treatment on the Umatilla NF
 - 280,000 acres of treatment on the Wallowa-Whitman NF
- 60-95% are dry forest treatments, depending on Forest

Key Science Camp Unplugged Discussion Questions

1. What are the key metrics of forest resiliency?
2. What science is appropriate to use at various scales?
3. How do we integrate the metrics of resiliency to encourage a persistent forested landscape, in light of likely climate changes?
4. Is the assessment approach scientifically sound within the context of the project objectives?
5. How do we utilize this science to inform the planning process?



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Overheard

“One of overlying purposes is to demonstrate how planning at this scale can be done. What is the data behind that? ”

- Bill Aney, Eastside Restoration Coordinator

“...social and political aspects...blunt the edges of hard science.”

*- Chuck Oliver, Deputy Forest Supervisor
Wallowa-Whitman National Forest*

“It is eye opening to see how difficult it is for stakeholders to think at a landscape scale, and understand how landscapes should look over time.”

- Tom Spies, Pacific Northwest Research Station

Key Question 1

What are the key metrics of forest resiliency?

- Departure from ranges of variation
- Disturbance Regimes
- Climate change vulnerability of forest, species habitats, and long-term landscape permeability



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Resiliency

The risks of a definition

Resiliency is the ability of a social or ecological system to absorb disturbances and climate change while reorganizing and changing, but essentially retaining the same function, structure, identity and feedbacks, the capacity for self-organization, and the capacity to adapt to stress and change (FSM 2020; Stine et al. 2014).

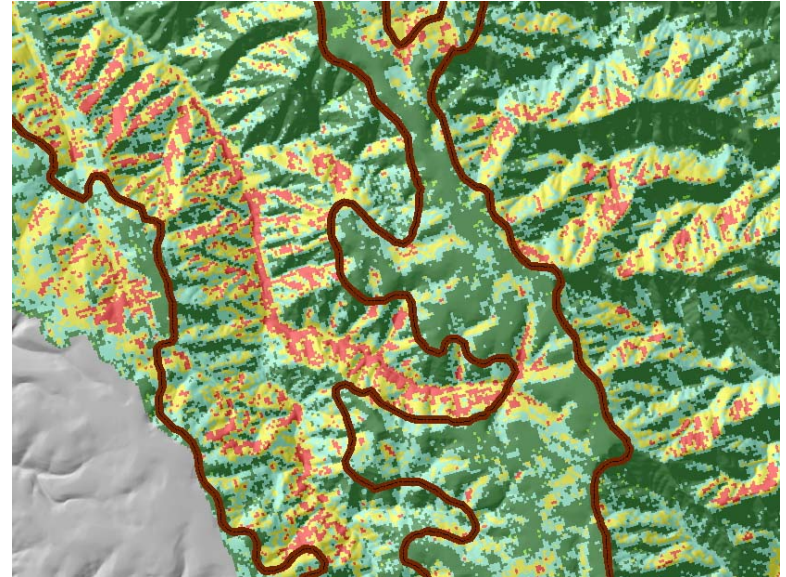


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Lessons

What are the key metrics of forest resiliency?

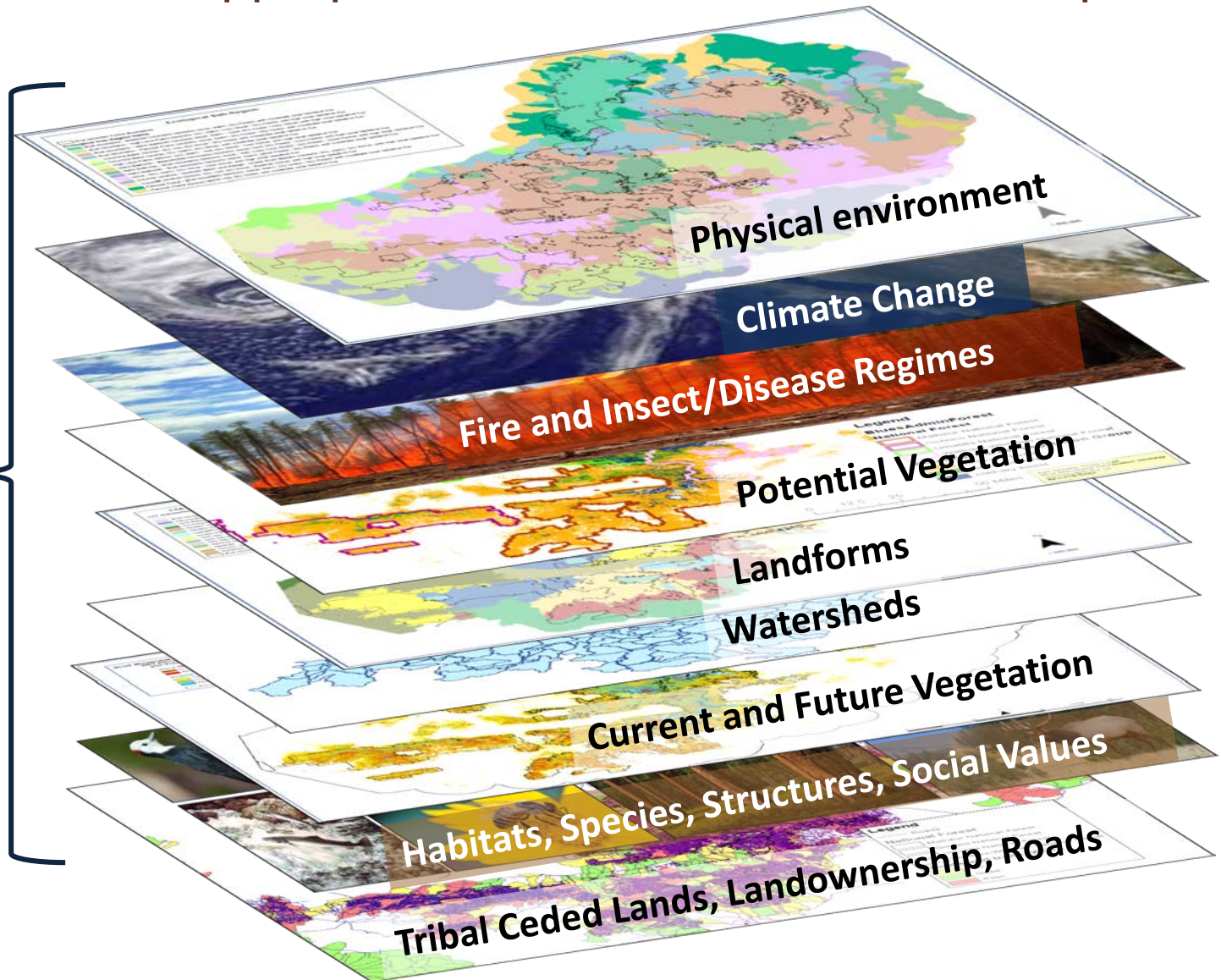
Restore conditions
that work well.



S u c c e s s i o n a l C l a s s e s

Key Question 2

What science is appropriate to use at various landscape scales?

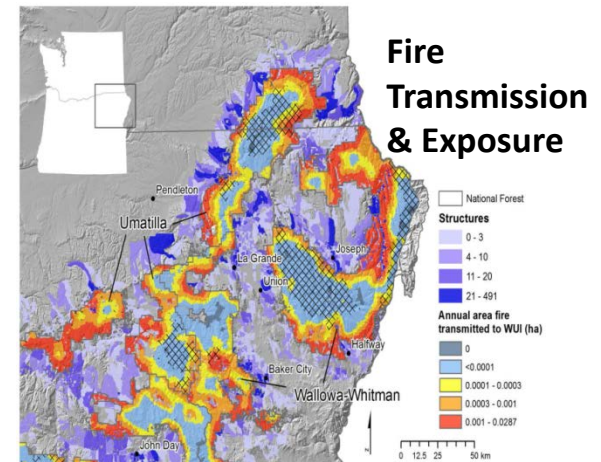
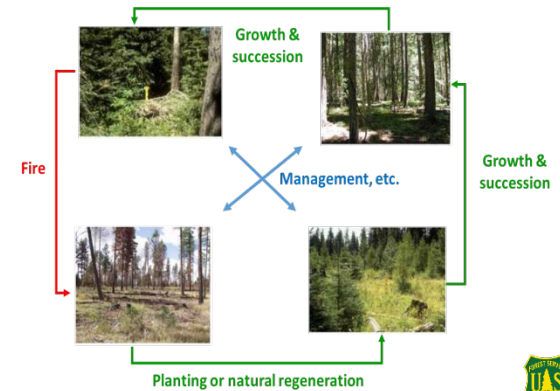


Lessons

What science is appropriate to use at various landscape scales?

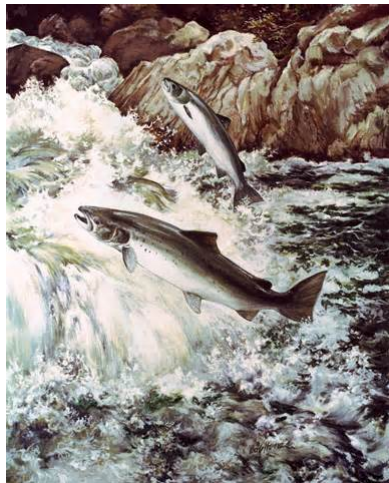
Tell a clear story.

Commonalities are more important than the differences between models.



Key Question 3

How do we integrate the metrics of resiliency to encourage a persistent forested landscape?

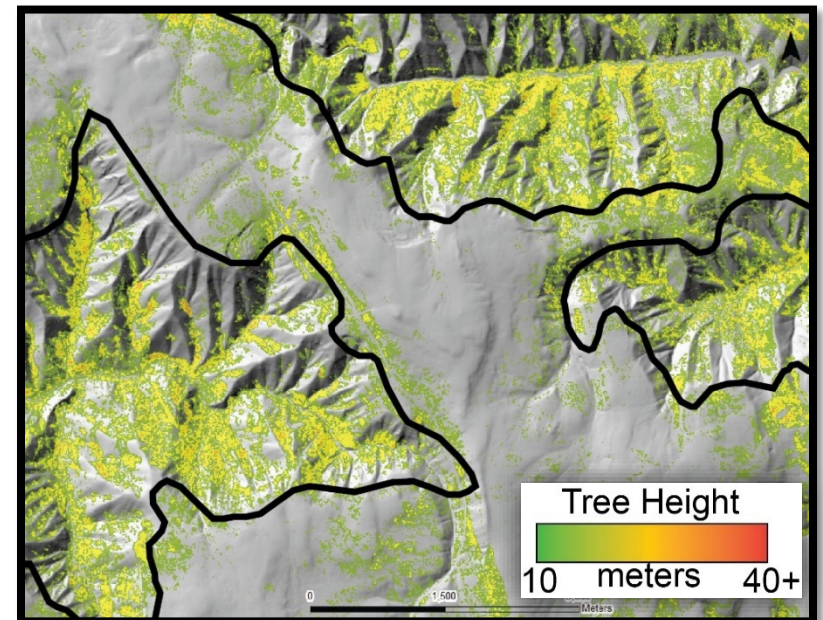
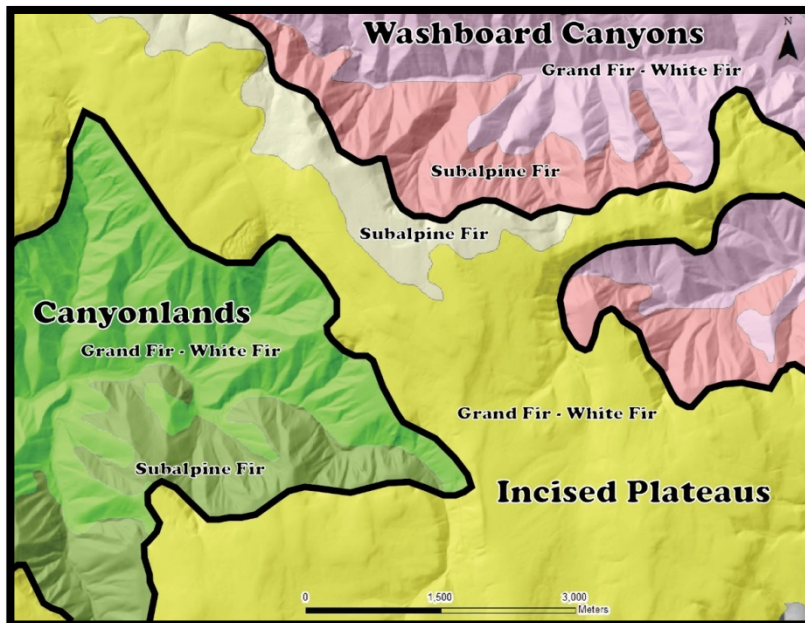


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Lessons

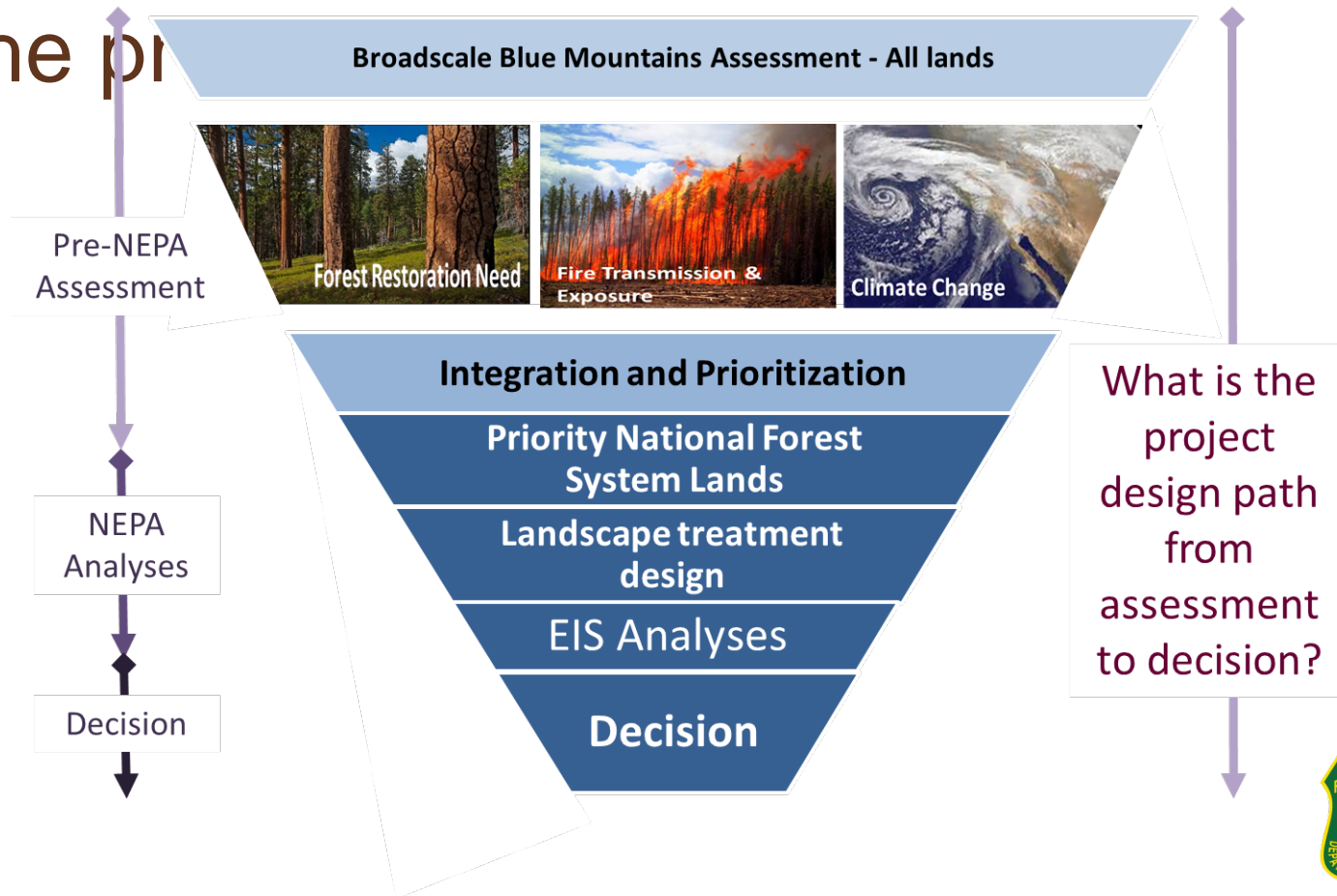
How do we integrate the metrics of resiliency to encourage a persistent forested landscape?

Fire, forest patterns, and landforms relate to many values.



Key Question 4

Is the assessment approach scientifically sound within the context of the project?



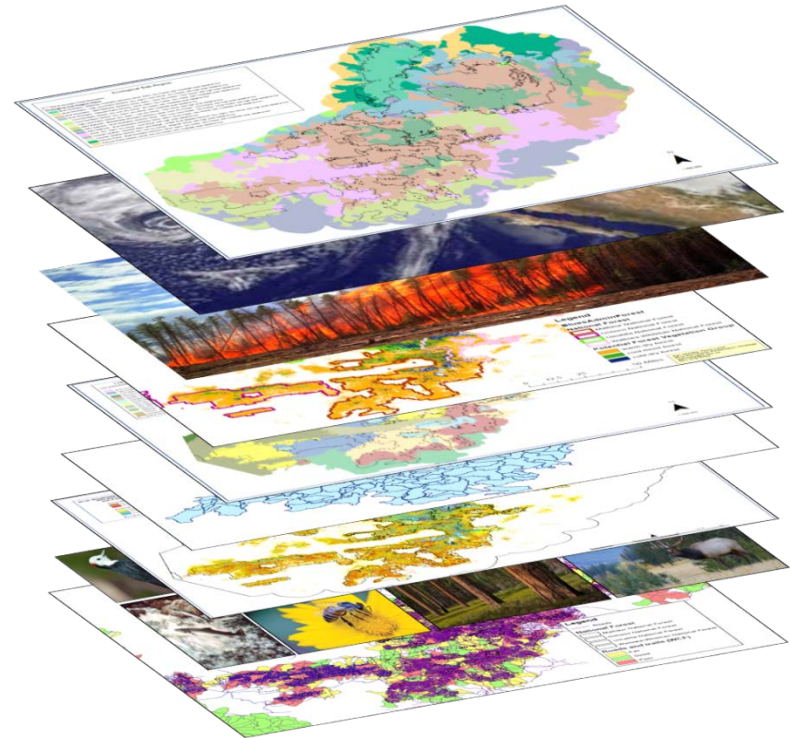
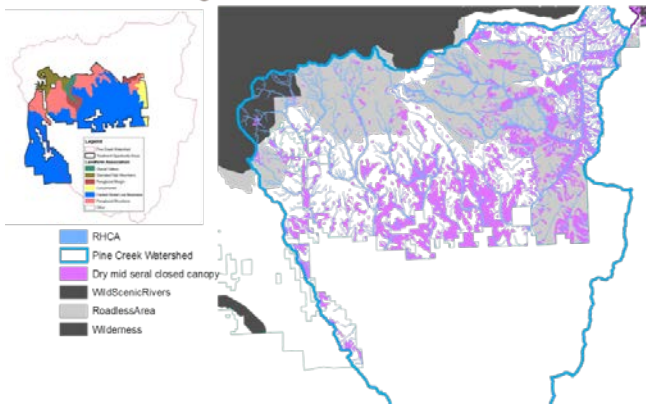
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Lessons

Is the assessment approach scientifically sound within the context of the project objectives?

Find the sweet spot of complexity, and stay out of the weeds.

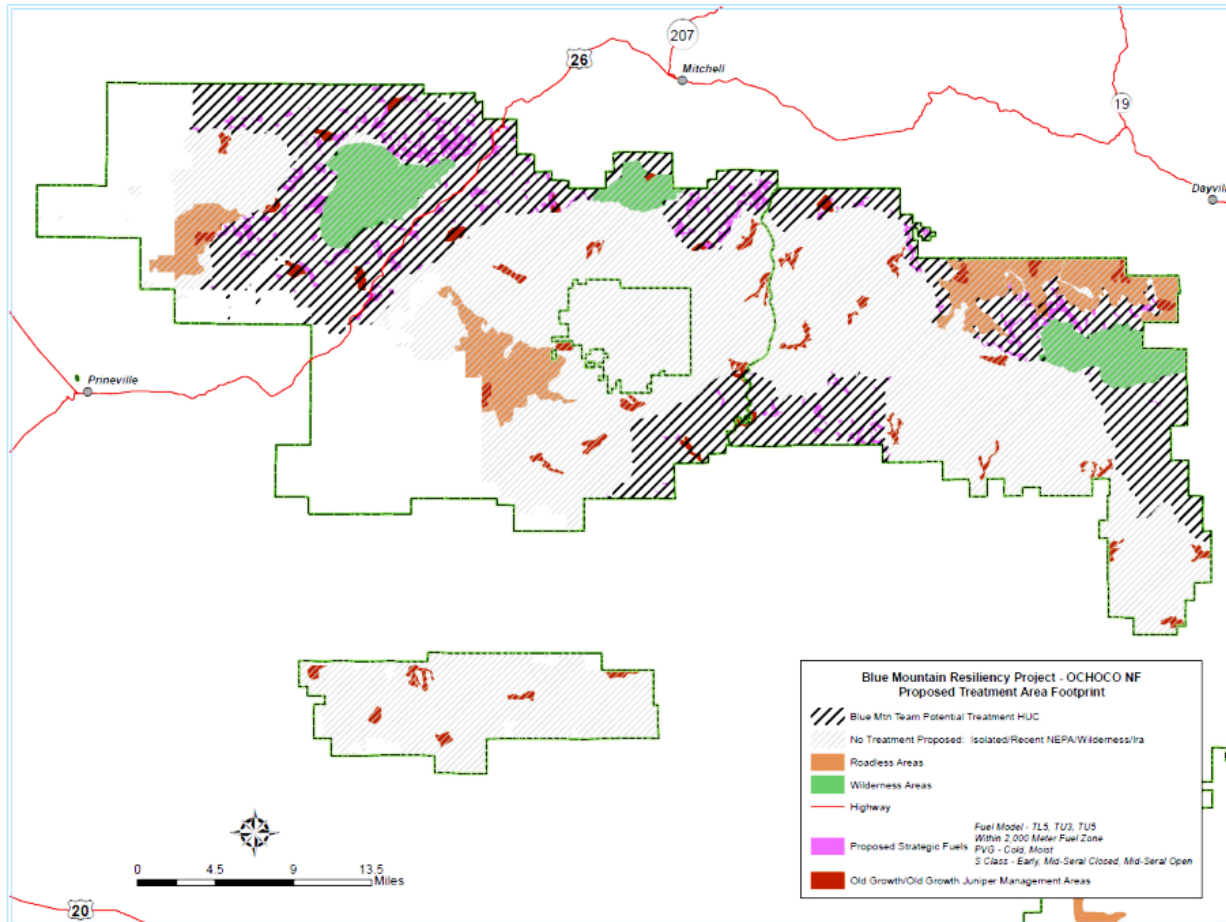
Pine Creek Watershed Example
Treatment design



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Key Question 5

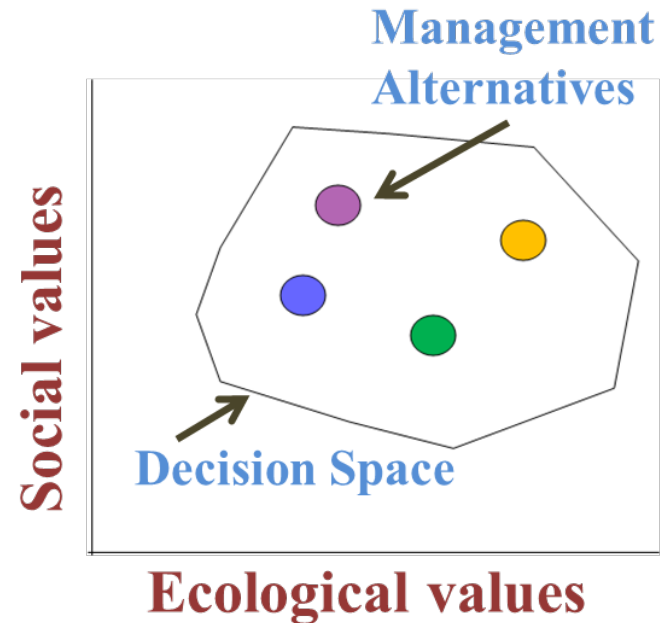
How do we utilize the science to inform the planning process?



Lessons

How do we utilize the science to inform the planning process?

Planning is an art as much as a science



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Objectives – Did we meet expectations?

- Discuss the key drivers of forest resiliency
- Document feedback on scientific strategies underlying the proposed action
- Document uncertainty in data or strategies
- Exchanging lessons learned about science and management in the Blue Mountains



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Overheard

“It’s been a real boost to know that everyone in this room is interested enough, cares enough, and wants the same thing.”

“This has been a great opportunity to see what it takes to really restore landscapes.”

“This reminded me how hard planning is.”

“To replicate this in the region, we have to grow people that can do this.”

“The team’s successes, failures, and learning are ours as well. “

“It’s been useful as researcher to come here. It’s easy to write research, but another thing to deal with the complexities.”

“We don’t have good examples of this, and this is one of the foremost efforts.”

“You’ve got to have the courage to think big.”

“Incremental headway is success.”

“The last few days have been an ideal demonstration of working together.”

“I am interested in repeating this type of workshop on annual basis.”

“There is no such thing as perfect science.”



Science Camp Unplugged

Overheard

“Yes, it’s big. Yes, it’s complex.
But don’t throw in the towel.”





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BLUE MOUNTAINS RESTORATION STRATEGY

Questions?

Thank you for your participation

Follow our project at:

www.fs.usda.gov/goto/bluemountainsforestresiliency