

The Front Range Ecosystem Resilience Project

Stakeholder
engagement and
convergence for better
science

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6/12/23



What is the FRERP?

- Physical Science
 - EcoTram
 - Electrical resistivity tomography (ERT)
 - Sap flow sensors
- Social Science
 - Land manager interviews
 - Representative public values survey
- Stakeholder Engagement
 - Workshop (May 2023)

CO Front Range is a unique area to study
and work on these issues



What are some challenges associated with considering refugia in management applications? Here, also think beyond your specialization to other management applications.

Challenges Integrating Refugia in Management Considerations

- Resources (capacity, funding, time)
- Scale
- Who gets to make decisions and under what timeframes they must be made
- Prioritization of ecosystems versus visitors
- Disconnect between management, policymakers, and the public

• Competing uses of visitors (that depend on others' needs)

Connectivity Scale Needs dependent on species

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Political polarization

Public Interests

Aligning management goals/desired future conditions with Refugia.

Source of Information → status quo

Funding

Lack of vision
Lack of leadership

Resistance to change
Fear
not knowing what to do

Considering all voices/values in defining refugia.

Complexity of issues → where to focus, what to measure

Lack of knowledge about species capabilities of adaptation

• need to preserve habitat to sustain "common" species + eco-type (as well as unique, endangered sp.)

Enormity of challenge

Value of refugia vs. risk (e.g. riparian areas are high fire risk, Vc of abundant fish)

EDUCATING Decision Makers

Evidence - making decisions with minimal evidence

How to assign "value" to a specific refugia.

Timeline of funding + implementation compared to Timing of Change

• focus on NOW vs. the future + long-term sustainability

Thinking Beyond Your SCOPE

• lack of robust public participation in decision-making challenges re land/soil/water management

Linear thinking - unpredictable + fast-moving changes

Environmental System Variability - # of variables interaction, randomness

Multitude of Diverse Refugia

• ecological LIMITS are real (LOSS of habitat is a losing game)

Scale of Problem vs. Budget + Timeline

• engaging a public that does not understand their personal "needs" + desires, but does not actually understand or apply the concept of "limits"

Vested interest influence

short-term mandates

Regime shifts - Unintended impacts from mgmt practices

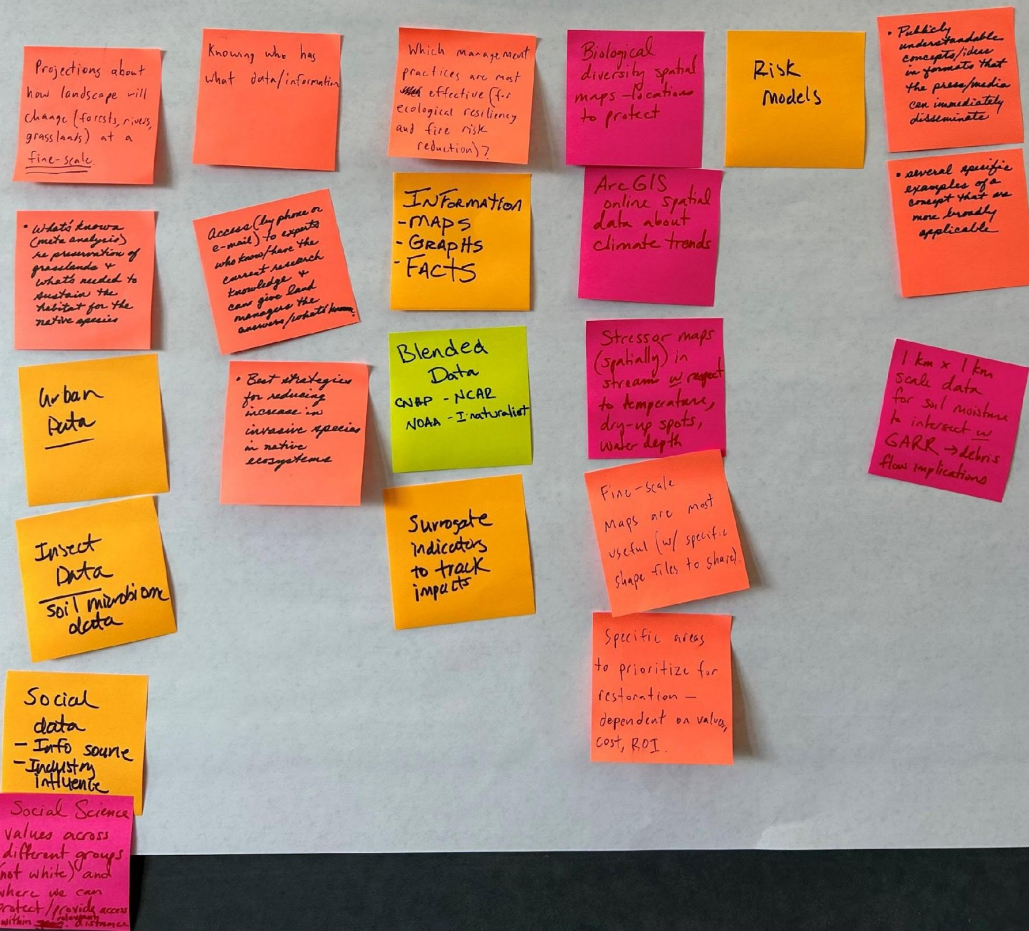
• the loudest voices from the public "win"

• staff w/ focused responsibility to substantially engage public in thinking about the future of natural systems they love.

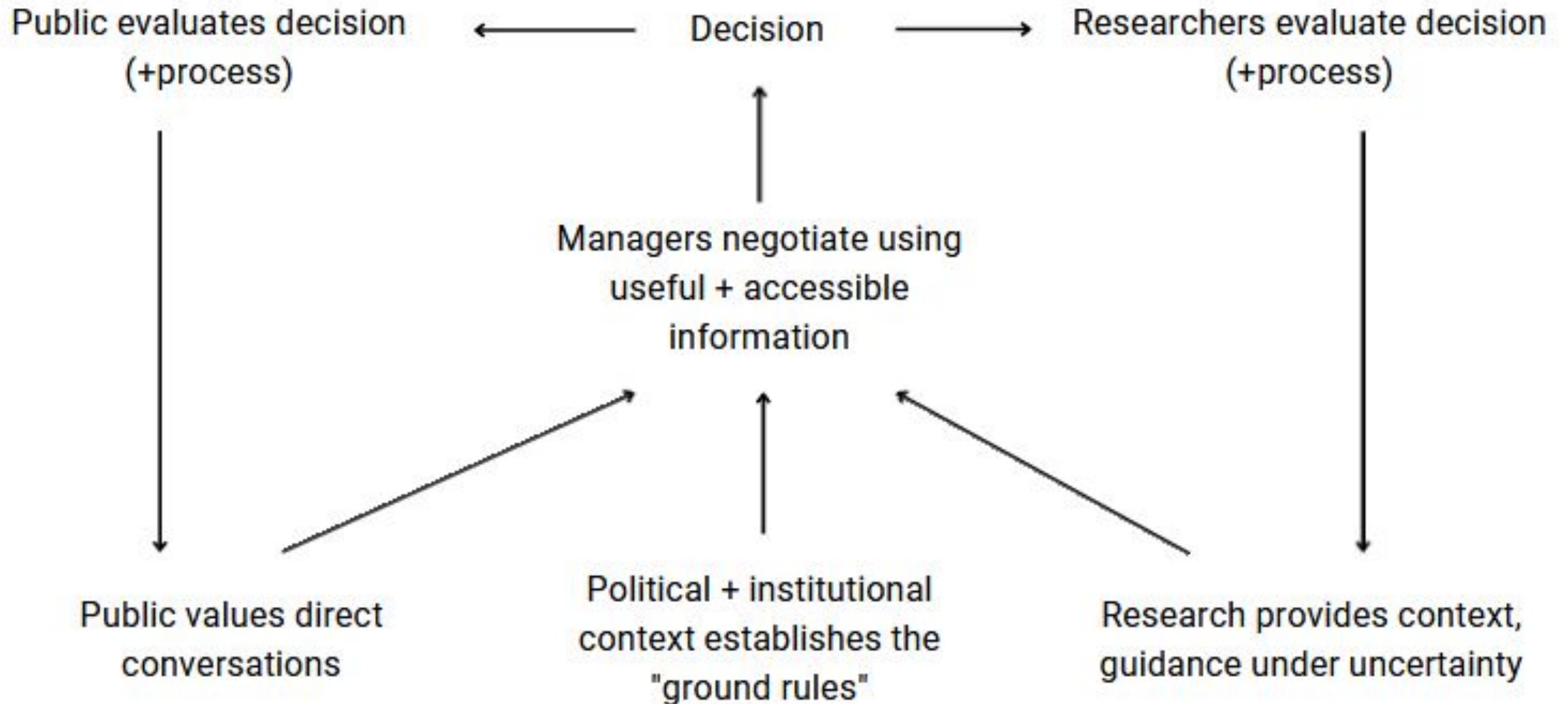
What information (about climate, ecosystems, or otherwise) do you wish you had?
 What forms would be most useful?

Information Challenges

- Data access
- Lack of leadership and communication among agencies
- Shifting baselines
- Useful information
 - Finest scale possible
 - Local data embedded in global context
 - Maps



Decision Spaces + Feedback Cycles



Why engage?

