

# SOIL FOR WATER FINAL EVALUATION

**Welcome!**

We'll get  
started  
soon!



NATIONAL CENTER  
FOR APPROPRIATE  
TECHNOLOGY



jg | RESEARCH &  
EVALUATION

## KNOWLEDGE SYSTEM MAPPING GOALS

**1**

Visually generate regenerative grazing network in Texas

**2**

Evaluate changes in attitudes, behaviors, and knowledge

**3**

Capture lessons learned from the project

# BEFORE: DEFINING "REGENERATIVE GRAZING"

to achieve agricultural success, restoring ecosystem processes

**Giving back to the land**

**Practices that encourage natural ecosystem functions**

generation

*"Brings life back to the system in all areas, including but not limited to ecologically,*

"Resilient system that improves profits, and brings nutritious food into the local food system"

**Promotes healthy soils and grasses**

starts with understanding that land is sick, suffering

Improving the water cycle - a shared interest between grazers and non-grazers/non-producers

**Rest and recovery of pasture**

connection between productivity and biodiversity

**careful livestock management**

Social benefits; ecosystem services that improve quality of life for people, community

**Soil for Water** definition: grazing that improves soil health

# AFTER: DEFINING "REGENERATIVE GRAZING"

Grazing that benefits and improves other natural resources including soil, plants, air, wildlife, water, etc.

A wholistic approach to looking at all aspects of a ranching operation and improving upon and moving towards a common goal.

Management that is cyclic and focused on the promotion of health of the whole system as opposed to an extractive mentality that only moves in one direction.

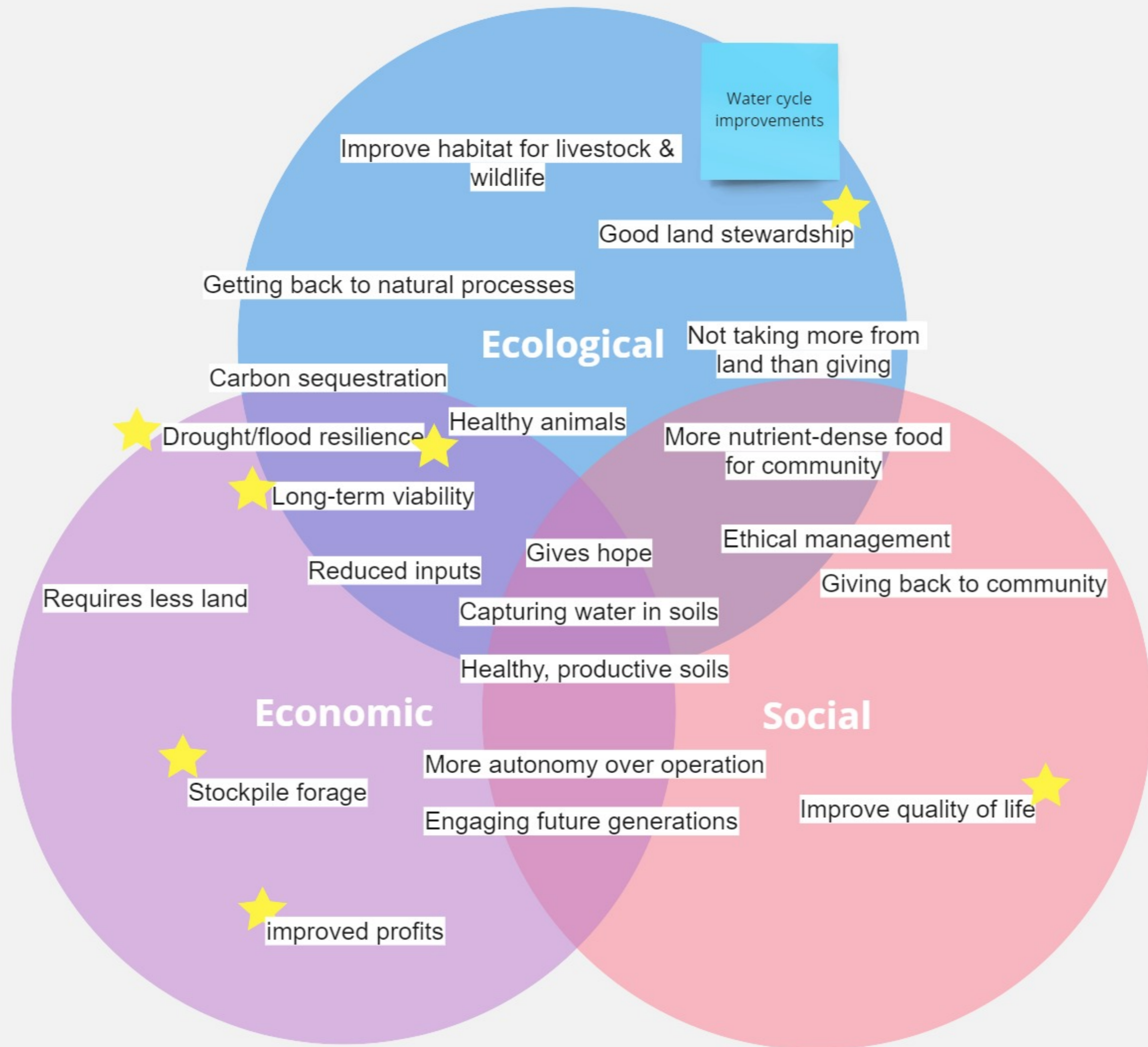
Generally, I find it is broadly perceived as grazing that "regenerates" rangeland ecosystems; however, there appears to be no definitive agreement on this. And, the assumption that grazing is regenerative is widely held without evidence.

Grazing one's property in a manner that maximizes utilization and allowing land to rest and recover adequately in order to promote healthy soils

The understanding of the principles of ecosystem functions to apply to practices that improve those functions.

Managing livestock grazing so that forage plants are bitten once in a pasture and then move the herd to another pasture and not return until all the plants have recovered above and below the ground.

# MOTIVATIONS FOR ADOPTION OF REGENERATIVE PRACTICES



## BIGGEST BARRIERS TO ADOPTION

Misconceptions that regenerative = intensive

### Paradigms

Tradition; understandings its not a buzz word but way to maximize yield and profit

Infrastructure \$ and fear of risk

Lack of experimental evidence

Lack of in-field educational opportunities

How has your understanding of barriers evolved?

Patience is a challenge - want to see results quickly but it takes time

Change comes from being inspired enough to change or desparate enough to need to change

Research and extension focuses on treating symptoms rather than addressing root causes

Need trusted research and trust between producers and researchers

How has project addressed barriers?

The more you do it, the more conviction and experience makes you better able to communicate

Safe-to-fail trials help address challenges - risk, experience, habit

Change can be incremental - doesn't have to be all or nothing

Build relationships, knowledge, realistic expectations - all take time

Have empathy for what it takes to change - time, knowledge, opportunity to try

## FACILITATORS OF ADOPTION

Item	Overall Rank	Rank Distribution	Score	No. of Rankings
Hands-on learning opportunities (e.g. workshops and trainings)	1		30	5
Mentorship by experienced regenerative grazier	2		29	5
On-farm learning opportunities (e.g. pasture walks)	3		28	5
Participation in grazing groups	4		27	5
Trusted educator/messenger	5		21	5
Scientific research and evidence on the benefits of regenerative	6		20	6
Promotion by agencies (e.g. NRCS, Extension)	7		18	5
Promotion by universities, research groups	8		15	5

Lowest Rank      Highest Rank

Policy shifts and more available funding

collaboration w/ existing ag orgs to get on their agenda

Repeated exposure to reliable information

How has your understanding of facilitators of adoption evolved?

Empathy

Trusted research - understand who is paying, structure of experiments

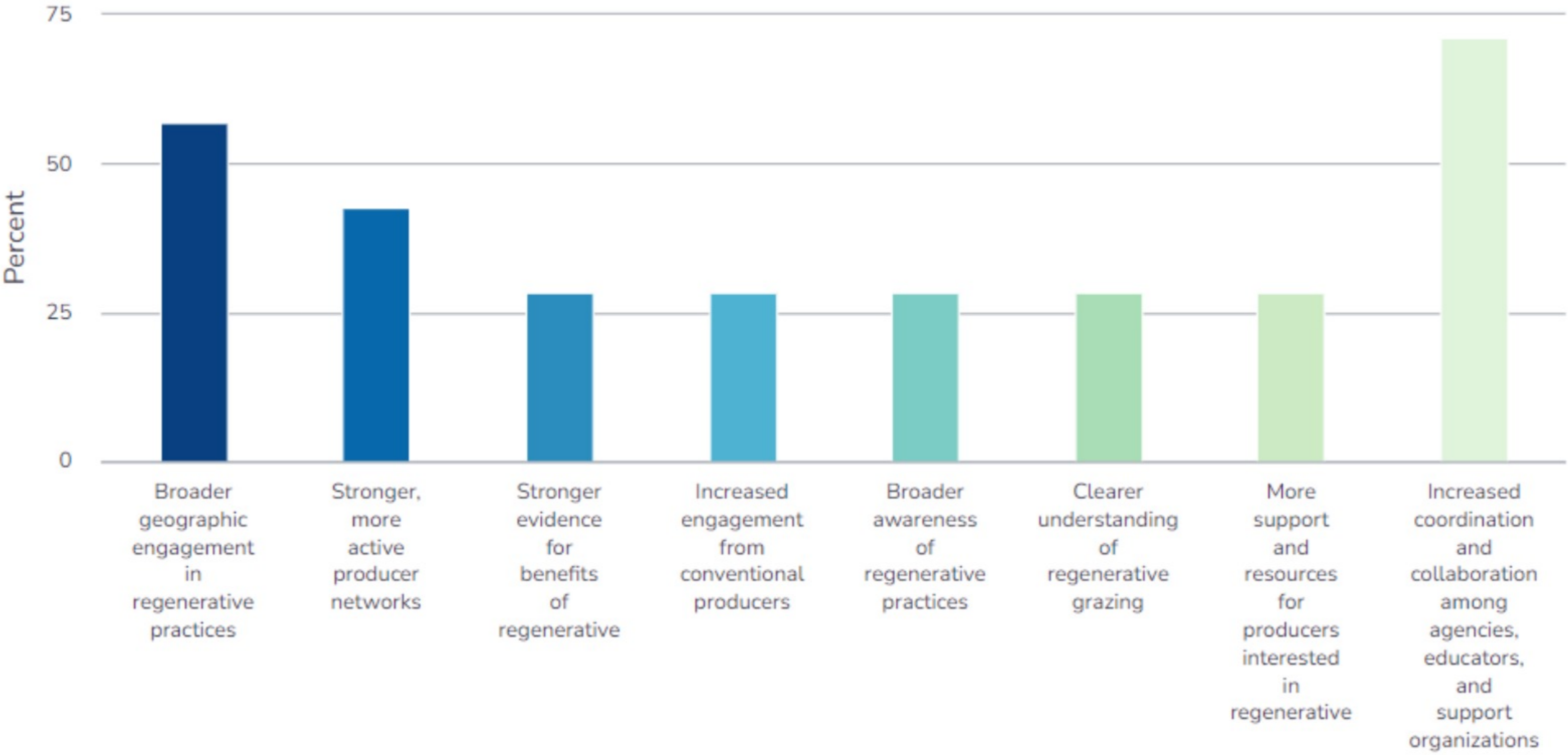
How has project supported facilitators?

on-farm trials

Trying to define research needs, questions to be asked, build trust

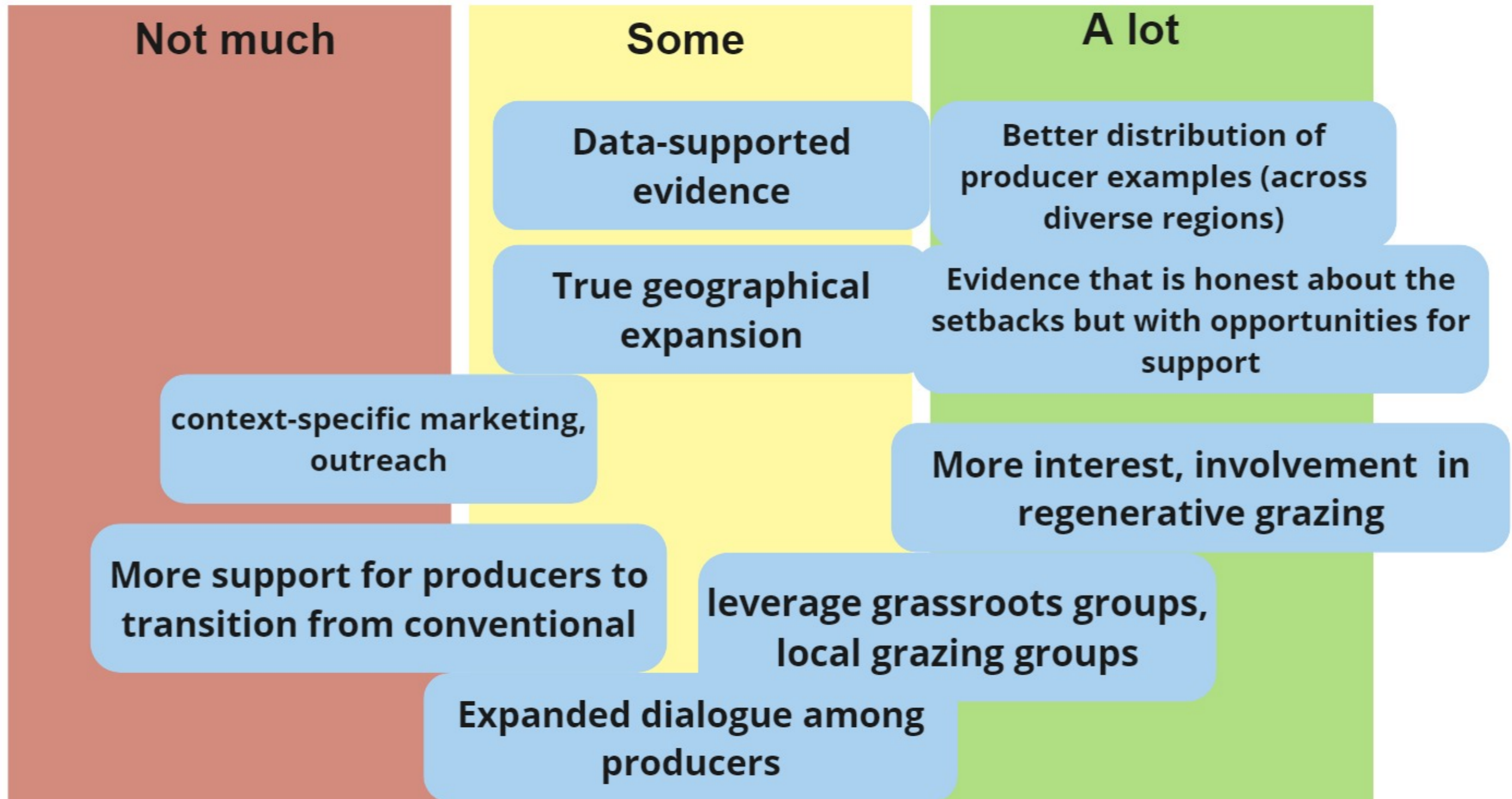
Connecting information/evidence from SRM to producers

22. From your perspective, what have been the benefits/outcomes of the Soil for Water project in your state? (Check all that apply)





## PROGRESS ON PRIORITIES FROM FIRST MAPPING



# BEFORE

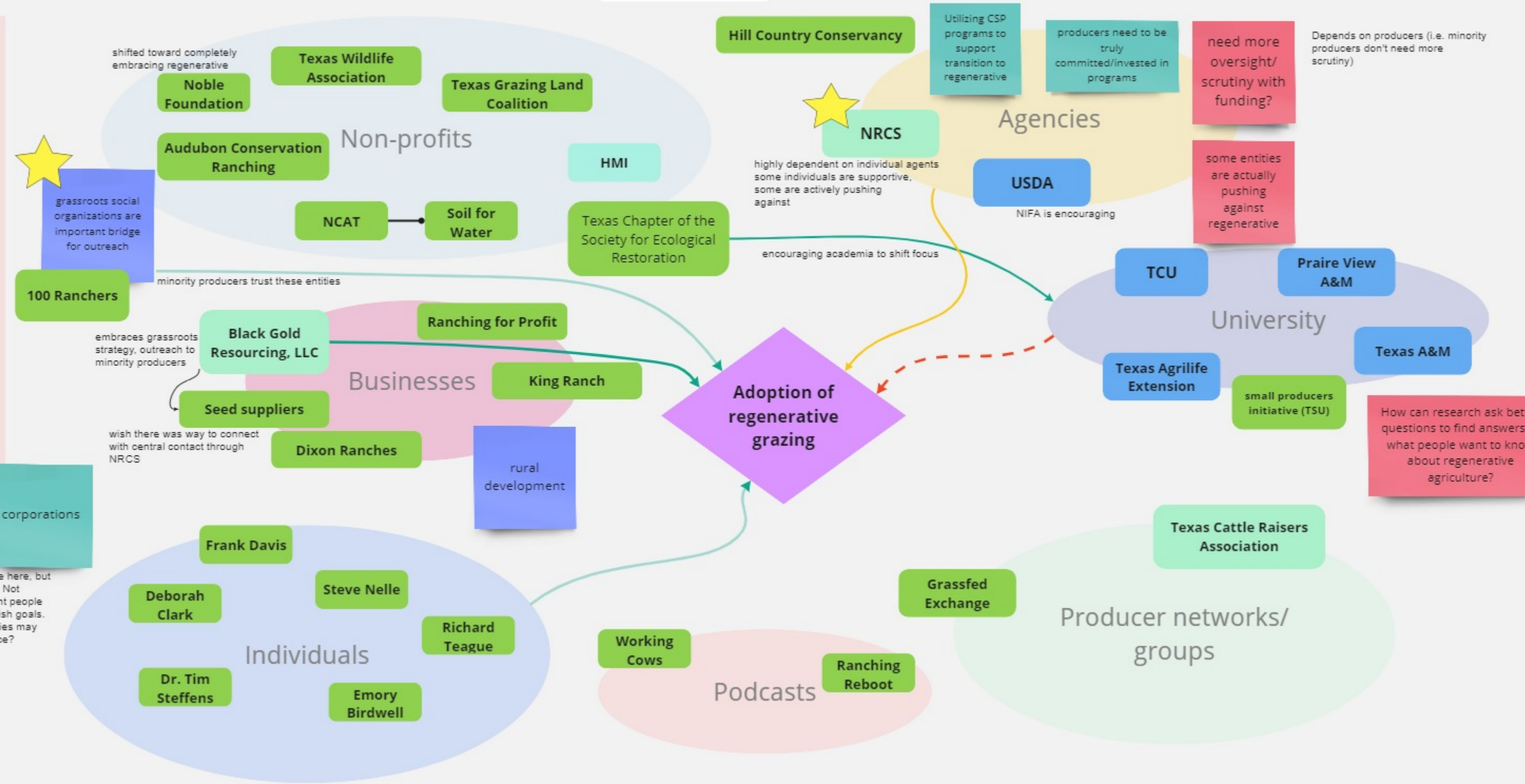
**KEY**

**ACTORS**

- Leading the way (Green)
- Room to improve (Blue)
- Both (Light Green)

**RELATIONSHIPS**

- Provides Resources (\$, time, etc.) (Solid black arrow)
- Provides research/evidence (Dashed black arrow)
- Provides training/mentorships (Thin solid black arrow)
- Strong (Thick green line)
- Neutral (Thin yellow line)
- Weak (Thin red line)



# AFTER

**KEY**

**ACTORS**

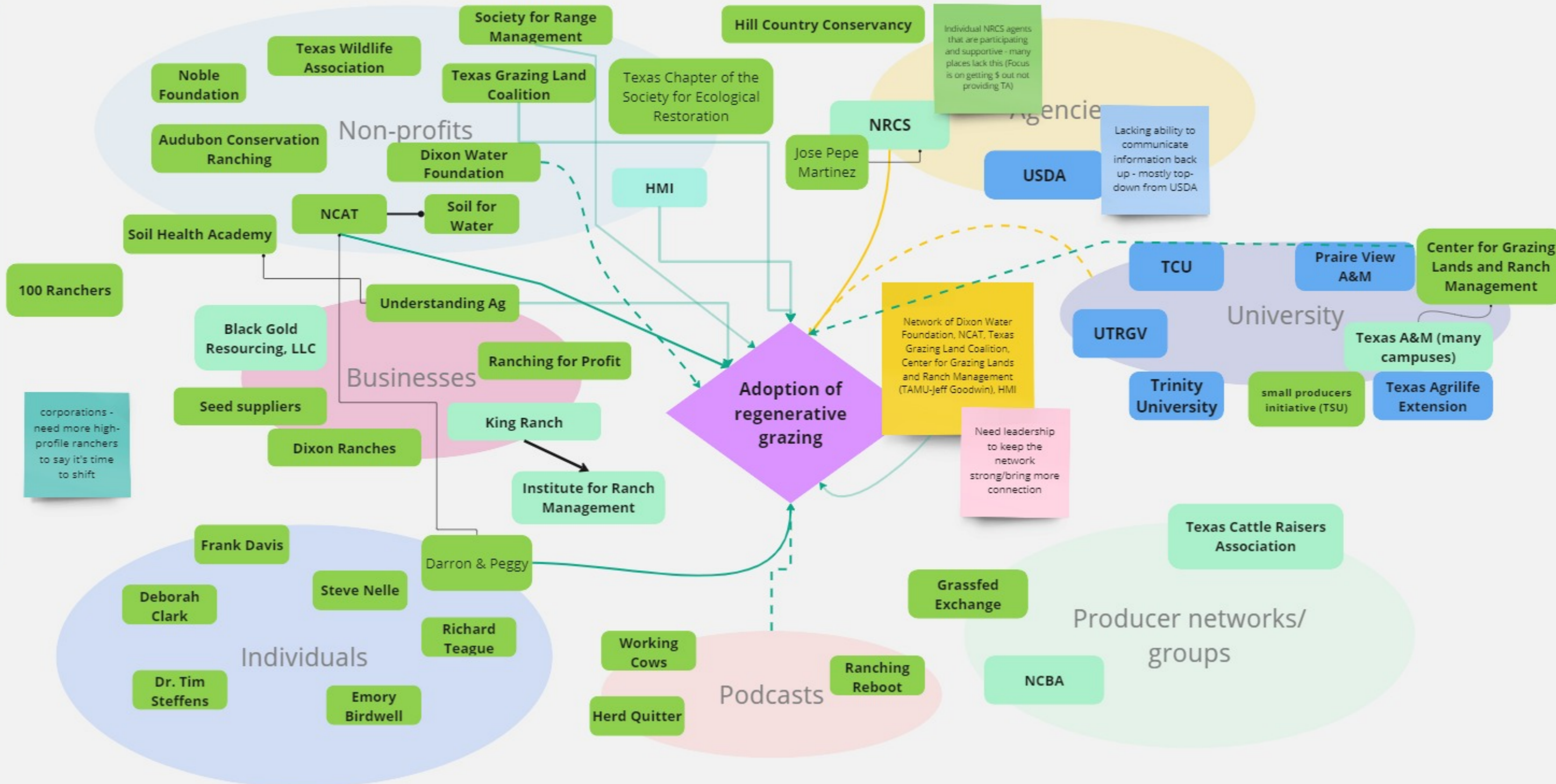
- Leading the way
- Room to improve
- Both

**RELATIONSHIPS**

- Provides Resources (\$, time, etc.)
- Provides research/evidence
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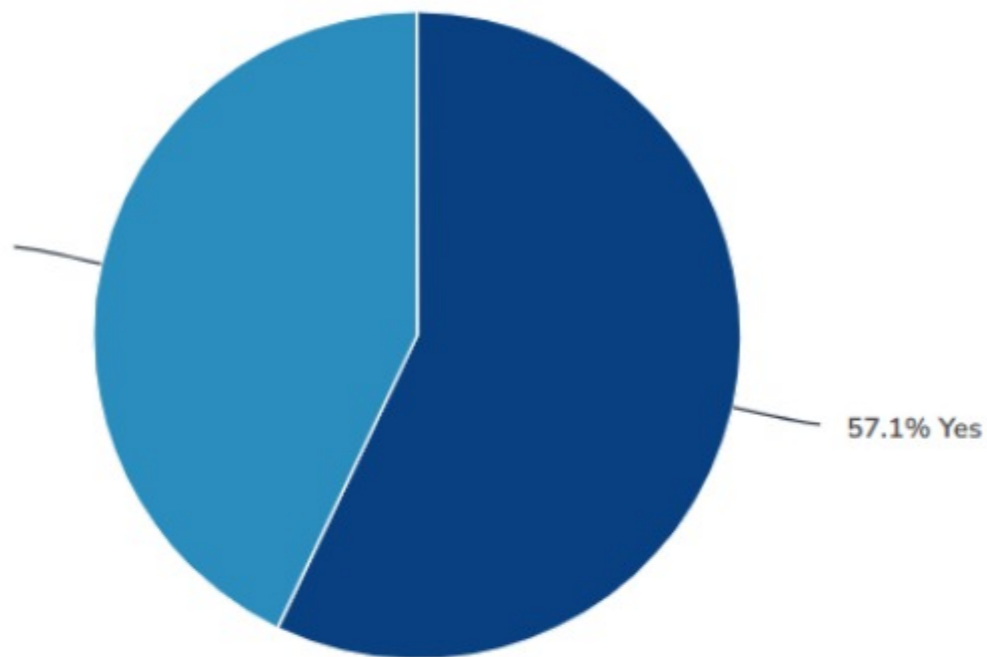
**Strength of Relationships**

- Strong
- Neutral
- Weak



# WHAT'S NEXT?

Are you interested in continuing to collaborate w/ your state beyond the project?



## How can the work continue?

Support and highlight the NRCS employees who are doing good!

stay in touch: biannual zoom call check-in; identify potential action

Converge on places to build connections, share information

TGLC leverage relationships with existing groups

reality of building good relationships-- networks form from that

Connecting the dots between networks

Finding researchers that want to work on this

University researchers

## Who needs to be involved?

NRCS

**THANK YOU!**

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**Send any additional thoughts/feedback to us or Darron**

## Texas: final knowledge systems mapping summary

### **Definition of regenerative grazing**

- Clear convergence in definition among group
  - o TX group did spend some time at beginning of project reaching shared definition, which shows in After map
- Emphasis on holism, thinking about ecosystem cycles as a whole and how they interact with each other systems-wide
  - o Embracing a health-oriented mentality rather than extractive, dogmatic approach
- In TX, emphasis on water cycle and how regenerative can improve water use/resilience is highly resonant with folks

### **Barriers to adoption**

- Top 3 barriers in Before: it goes against status quo, lack of evidence/info about benefits, high initial investment cost
- Barriers in After were mostly the same, some additional barriers noted:
  - o misunderstanding about what regenerative is about—that it can maximize yield and profit
  - o the fact that it requires patience and takes time to see results
  - o often, the desire to change stems from being desperate enough to need to
  - o lack of trust between producers and researchers making it difficult to translate evidence
  - o research and extension more focused on treating symptoms than addressing root causes
- ways in which TX group has worked to address barriers:
  - o Safe to Fail trials have been instrumental in helping to address fear of risk, lack of experience, changes to habits
    - Helps to convey that change can be incremental, doesn't have to be all at once. Producers can start small, learn from it and slowly make changes
    - Relationships and partnerships among producers/agencies/non-profits have helped to build realistic expectations about adoption—what it takes but also the benefits that can be realized
    - Building expertise, confidence among producers in working group—making it easier to communicate, share knowledge

### **Facilitators of adoption**

- Top 3 facilitators: hands-on opportunities, mentorship, on-farm learning opportunities
  - o Research, evidence, promotion by institutions ranked as lowest facilitator
  - o Additional facilitators: changes in policy that increase available funding, collaboration with existing ag orgs/getting on their agenda, repeated exposure to reliable information
- Discussion about science and research being foundation, but there have been historical challenges with universities/extension not doing a great job with translating to practice/producers

- Also research doesn't always feel based in producers' reality—some distrust here
- Opportunities to connect willing producers with open-minded researchers (perhaps less traditional ag researchers—e.g. Kelly Lyons)
- There's a need to build trust between producers and researchers
- Importance of having empathy as educators/mentors/peers—that it's difficult to change how you've always done things, it takes patience, time, and courage
- Need trusted research—transparent funders, methodology
- TX group has supported facilitators through on-farm trials, connecting evidence from research institutions to producers/building trust, narrowing in on what the research needs are from practical standpoint

### **Progress on priorities**

- Not much/some: context-specific marketing outreach, more support for producers to transition from conventional
- Some: data-supported evidence, true geographical expansion, expanded dialogue among producers
- A lot: better distribution of producer examples, evidence that is honest about setbacks, opportunities, more interest, involvement in regenerative grazing, leverage grassroots groups

### **Map**

- New actors
  - Non-profits: Society for Range Management, Dixon Water Foundation,
  - University: Trinity University, UT- Rio Grande Valley
  - Producer groups: National Cattlemen's Beef Association
  - Podcasts: Herd Quitter
  - Individuals: Darron & Peggy
  - Businesses: Institute for Ranch Management (King Ranch)
- New partnerships: Dixon Water Foundation/NCAT/Texas Grazing Land Coalition/Center for Grazing Lands and Ranch Management (TAMU)
- There are leading NRCS agents who are very supportive, but this is not the case everywhere
- Reflection on some of the more conventional institutions/ranches getting more involved in regenerative/ becoming more open-minded (TAMU, King Ranch)

### **What's next**

- How can work continue:
  - Highlight the NRCS agents that are supportive
  - Keep this group in touch
  - Converge on places to build connections/share info—centralize communications
  - TGLC leverage relationships with existing groups
  - Keep at the network-building, it takes time
- Who needs to be involved:
  - NRCS
  - Universities/researchers

- Connecting willing producers with interested researchers
- Connecting the dots between networks

### **Overall observations**

- New and stronger partnerships across non-profits, agencies, universities, and businesses have created a strong regenerative grazing network, representing organizations and producers from across the state
  - Network facilitated numerous quality hands-on and/or on-farm learning opportunities
- Safe to fail trials proved be an effective model for not only facilitating adoption among producers implementing the trials, but documenting the benefits and challenges of adoption from a producer perspective, and breaking down barriers/inspiring other producers
- While not necessarily a result of SSARE project, more conventional institutions (e.g. TAMU) are getting involved in regenerative practices
  - More opportunity for partnerships, expanded resources
- There are some local NRCS agents who are supportive of regenerative, but in general NRCS's role in promoting regenerative continues to be weak
- There's room to improve in building trust between institutions (agencies, universities, extension) and producers when it comes to research/evidence re: regenerative
  - Safe to fail offers roadmap