



SUSTAINABILITY RESEARCH visioning event



Sponsored by the UW- Madison
Sustainability Research Hub



SUSTAINABILITY RESEARCH

visioning event

PROMOTE INTERDISCIPLINARY RESEARCH

- BREAK OUT SESSION -

Sept 11th, 2024 | **UW-Madison**

Jennifer Hauxwell, Aquatic Sciences Center
Alison Mikulyuk, Aquatic Sciences Center
Adrienne Nienow, Research Impact &
Outreach
Erin Silva, Plant Pathology



Session Goals

This session will explore innovative strategies to bridge diverse academic disciplines, encouraging collaboration and knowledge sharing.

We'll identify potential barriers and brainstorm actionable solutions to promote a culture of interdisciplinary research.

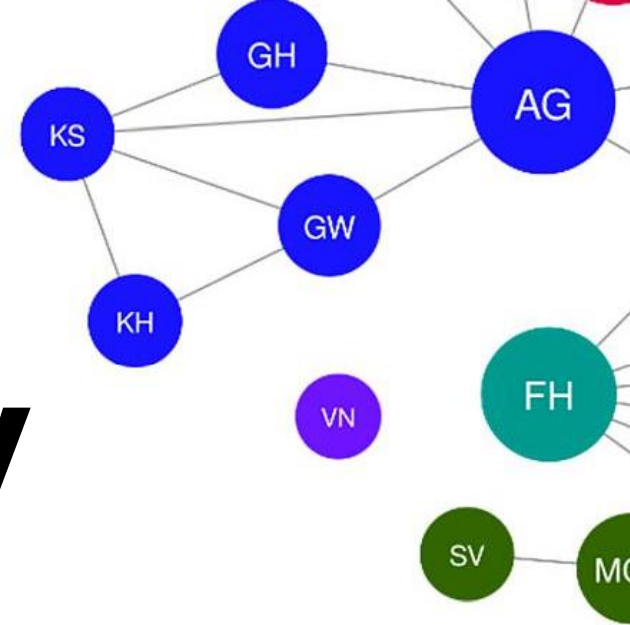
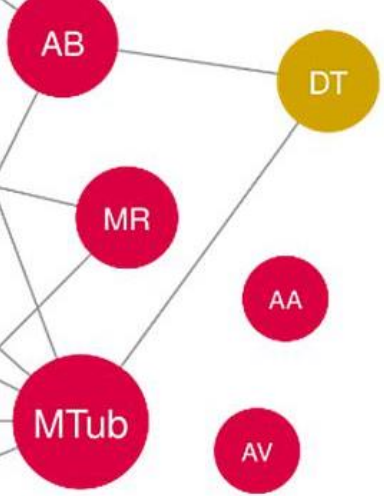


Co-Presenters – Jennifer Hauxwell and Alison Mikulyuk

Why do we do interdisciplinary research?

Interdisciplinary teams can tackle more complex problems than any one discipline alone.

Problem-solving research must include external partners to ensure appropriate, implementable & lasting solutions



Research + Engagement = Impact

Science

+

People who care

(Engaged Citizens, Communities, Businesses, Industries, Resource Managers, Policy Makers)

Informed decisions and actions that can
achieve desired impacts

How do we support interdisciplinary research?

Focus on building relationships

Design programs for interdisciplinarity (break down silos)

Fund & incentivize interdisciplinary & community-engaged work



Aquatic Sciences Center
UNIVERSITY OF WISCONSIN-MADISON



Water
@UW-MADISON





Water@UW-Madison supports a cross-disciplinary network of water researchers pursuing **community-driven & policy-relevant** research that serves the needs of the state, its people, and the environment.

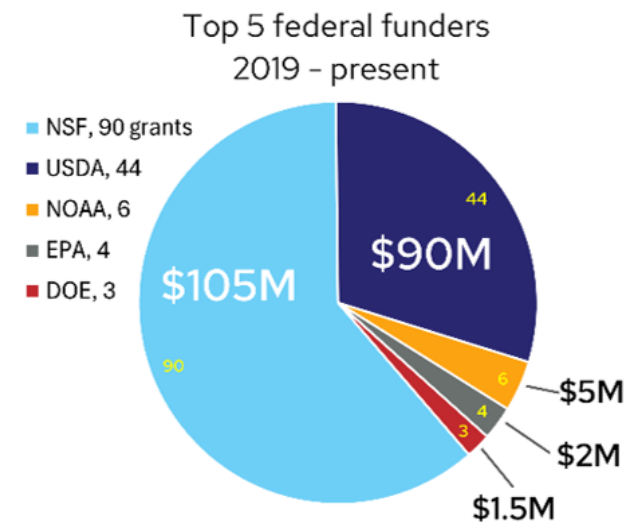


170

Faculty & staff affiliates from
50 campus administrative units

A productive research network

In the last 5 years, our affiliates have written over 2,000 peer-reviewed articles and secured over \$206M in federal funding.

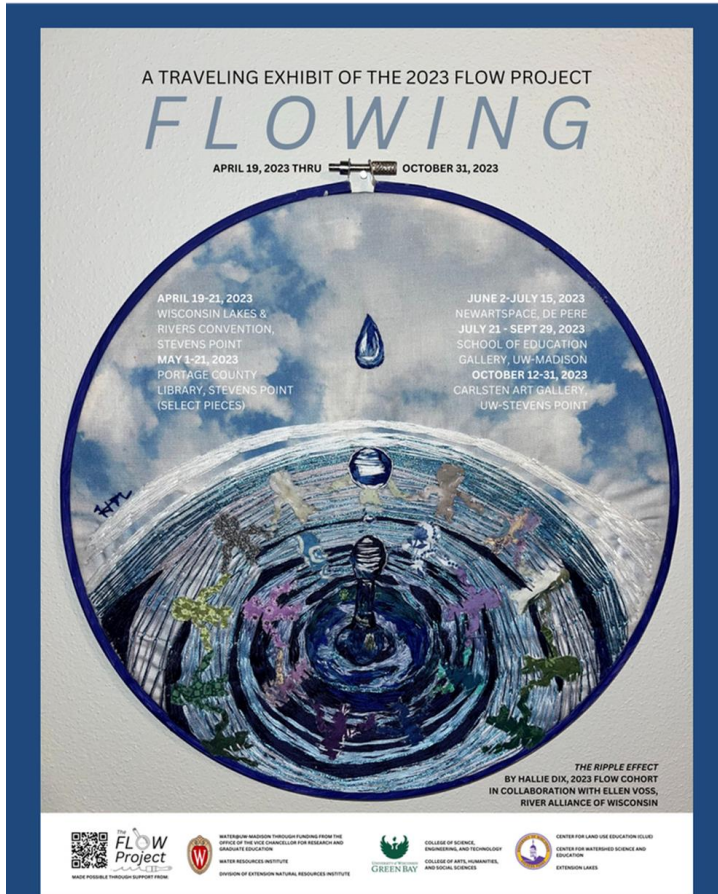


Hold space for connections



Symposia emphasizing communication & connection, time for networking, "all are welcome" mentality, touchpoints that attract a broad audience

Design programs & events for interdisciplinarity



Building transformative knowledge through cross-disciplinary exchange: **Flow**



Activating the Wisconsin Idea:
Community-based water research grants



Supporting undergraduate research across sites and across disciplines with the **Freshwater@UW REU**

Programs that encourage or incentivize interdisciplinary and community-engaged work

Provide incentives



Wisconsin Sea Grant Institute - and - University of Wisconsin Water Resources Institute

Support multidisciplinary research, education and outreach for the protection and sustainable use of Wisconsin's water resources

- Federal/State partnerships for over 50 years
- Center within UW-Madison (Office of the Vice Chancellor for Research)
- Administer 2 statewide Universities of Wisconsin (System) programs
- 29 staff in 6 locations (Madison-Goodnight Hall, Milwaukee, Green Bay, Manitowoc, Bayfield, Superior) including water experts in various topics that serve as bridge-builders
- Focus on community engaged research and outreach
- ON-CAMPUS GRANTING ORGANIZATIONS with water priorities, infrastructure, etc., to vet and move money out to researchers across the state and to facilitate connections between researchers and communities

-Examples of recent funding opportunities



Request for Proposals 2024-26

PREPROPOSALS
An informational webinar for prospective investigators will be from 10-11 a.m. CST on Friday, November 18, 2022, via <https://uwmadison.zoom.us/j/99763198737?pwd=WmppT1R0QlY4ZGUySmRrVG54SWlWdr09>
(Meeting ID: 997 6319 8737, Passcode: 599170)
DUE DATE - Friday, January 13, 2023, 3 p.m. CST
SEE APPENDED GUIDELINES FOR PREPROPOSALS

FULL PROPOSALS
An informational webinar for prospective investigators will be from 3-4 p.m. CDT on Thursday, March 2, 2023, via <https://uwmadison.zoom.us/j/98492989897?pwd=ME14M3EyWDVMUx1eCUUGVWSG53QT09>
(Meeting ID: 984 9298 9897, Passcode: 486921)
DUE DATE - Friday, April 28, 2023, 3 p.m. CDT

All Sea Grant project funds are awarded via a highly competitive process involving external peer reviews and the recommendations of external advisory panels.
Our next two-year grant period begins on FEBRUARY 1, 2024.

seagrant.wisc.edu/rfp

To SUBSCRIBE to the RFP notification email list, send an email to: jennifer.haunwell@aqu.wisc.edu

\$1.4 million/year for Great Lakes research

State of Wisconsin Groundwater Research and Monitoring Program FY26 Request for Proposals



Joint Solicitation

July 1, 2025 – June 30, 2026

Facilitated by:
Wisconsin Groundwater Coordinating Council and University of Wisconsin Water Resources Institute

Participating state organizations:
Universities of Wisconsin / Wisconsin Department of Natural Resources / Wisconsin Department of Agriculture, Trade and Consumer Protection / Wisconsin Department of Safety and Professional Services

Proposal Submission Deadline:
3 p.m. CDT, Friday, November 1, 2024

An informational webinar for prospective investigators will be from 12-1 p.m. CDT on September 6, 2024, with connection information here: <https://uwmadison.zoom.us/j/98941862699?pwd=L2J0aUhsN0cwY0F3TTB4QUlNS3lFZz09>
Meeting ID: 989 4186 2699, Passcode: 624976. We will record the meeting.

To SUBSCRIBE to the RFP notification email list, send an email to: jennifer.haunwell@aqu.wisc.edu



State of Wisconsin | GROUNDWATER COORDINATING COUNCIL
TONY EVERS, GOVERNOR
101 South Webster, Box 7921, Madison, Wisconsin 53707
FAX 608-267-7650 ■ TDD 608-267-6897

\$250-500k /year for groundwater research

Funding levels
stagnant for
years, many
fundable
proposals by
UW-Madison
PIs turned
away



Opportunities *from a program managers' perspective*

- Support existing cross-disciplinary organizations that focus on building relationships
 - e.g., Water@UW-Madison, Center for Ecology & the Environment, Extension, others
 - Include internal & external relationship-building
- Consider interdisciplinarity and community-engagement in internal funding & staffing decisions
 - Incorporate in new University Budget Model (indirect incentives, other?)
 - Additional support for existing funding programs with these goals
 - e.g., Sea Grant and Water Resources Institute funding opportunities and others
 - Invest in bridge builders who connect research and communities
 - e.g. Extension, Engagement, Public Service positions
 - Include objectives in tenure, performance reviews to incentivize the Wisconsin Idea
- Look for opportunities to streamline administrative barriers for cross college/dept collaborations and external partnerships
- Support cross-disciplinary student groups

How do we cultivate interdisciplinary research?

Adrienne Nienow

Creative Manager | Research Impact and Outreach

*College of Engineering
Grainger Institute for Engineering
Clean Energy Community Initiative*





GIE was established as a multidisciplinary research institute in 2015.

graingerinstitute.engr.wisc.edu



CECI is a multi-sector network of clean energy partners collaborating to build equitable clean energy solutions across Wisconsin.

ceci.wisc.edu



Opportunities
*from a research
communicator's
perspective*

*A: Marketing and communications
strategies can—and should—be used
to foster interdisciplinary collaboration.*



A: Marketing and communications strategies can—and should—foster interdisciplinary collaboration.

Case Study: Creating space for “chance” encounters

Grainger Institute for Engineering leveraged its Comprehensive MarComm Plan to "cultivate an environment where collaboration and scientific advancement thrive".

Supporting MarComm Strategy: Foster networking and relationship building among faculty.

Supporting MarComm Tactic: Host events to encourage information exchange among faculty.

Implementation: **Thank Grainger It's Friday!** social hour events were hosted by GIE from 2018 - early 2020.

TGIF! Format:

- 2-3 faculty flash talks from different (usually engineering) disciplines
- Casual networking following presentations
- Cocktail tables, refreshments, and appetizers kept the atmosphere casual and encouraged movement throughout the room

TGIF! Outcomes:

- Unexpected connections
- New collaborations
- One unlikely pair pursued and won funding together, attributing their connection to the series





Opportunities *from a research communicator's perspective*

B: *We can strengthen our capacity to work together by focusing on critical connections rather than critical mass¹*

¹ Brown, A. (2017). Emergent strategy. AK Press.



B: *We can strengthen our capacity to work together by focusing on critical connections rather than critical mass¹*

Case Study: Advancing individual and collective goals, together

The Clean Energy Community Initiative (CECI) fosters interdisciplinary and multi-sector collaboration with a facilitated co-discovery and co-design process.

The Community Discovery Workshop brings community leaders and the appropriate stakeholders to explore clean energy opportunities in the state.

Who to invite?

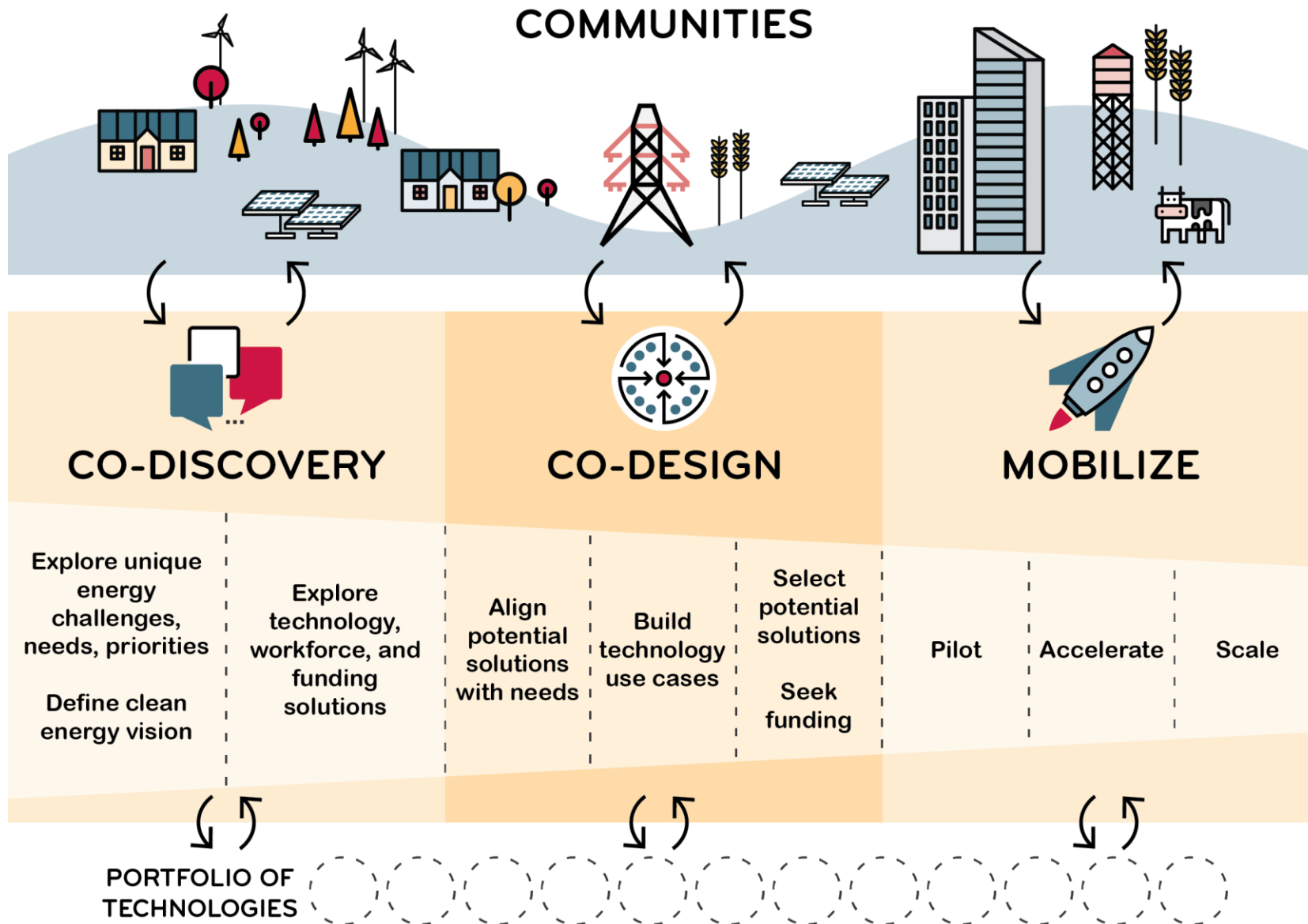
- Who do we need to learn from?
- Who may be impacted by the ideas or outcomes?
- What partners and stakeholders are critical to success?

Format: Workshops begin with an overview of the technology and funding opportunities available for clean energy projects.

Then, the co-discovery begins:

- Identify interests
- Understand challenges
- Look for common goals
- Explore needs
- Build connections
- Vision the future





B: *We can strengthen our capacity to work together by focusing on critical connections rather than critical mass¹*

Case Study: Applying the CECI model to interdisciplinary team building in an academic context

The **Energy Storage Investigators** Workshop brought multidisciplinary researchers and technology developers together to identify and organize around their intersecting priorities.

Who was invited?

- UW investigators who self-identified in the electrochemical, mechanical, molecular, and/or thermal energy storage space.
- A second workshop included industry representatives from sectors primed for the application of energy storage solutions

Format: Workshops began with an ice breaker and a topical overview.

Co-discovery included some or all of these activities:

- Identify interests and capabilities
- Explore challenges, needs, and priorities
- Build connections
- Vision the future

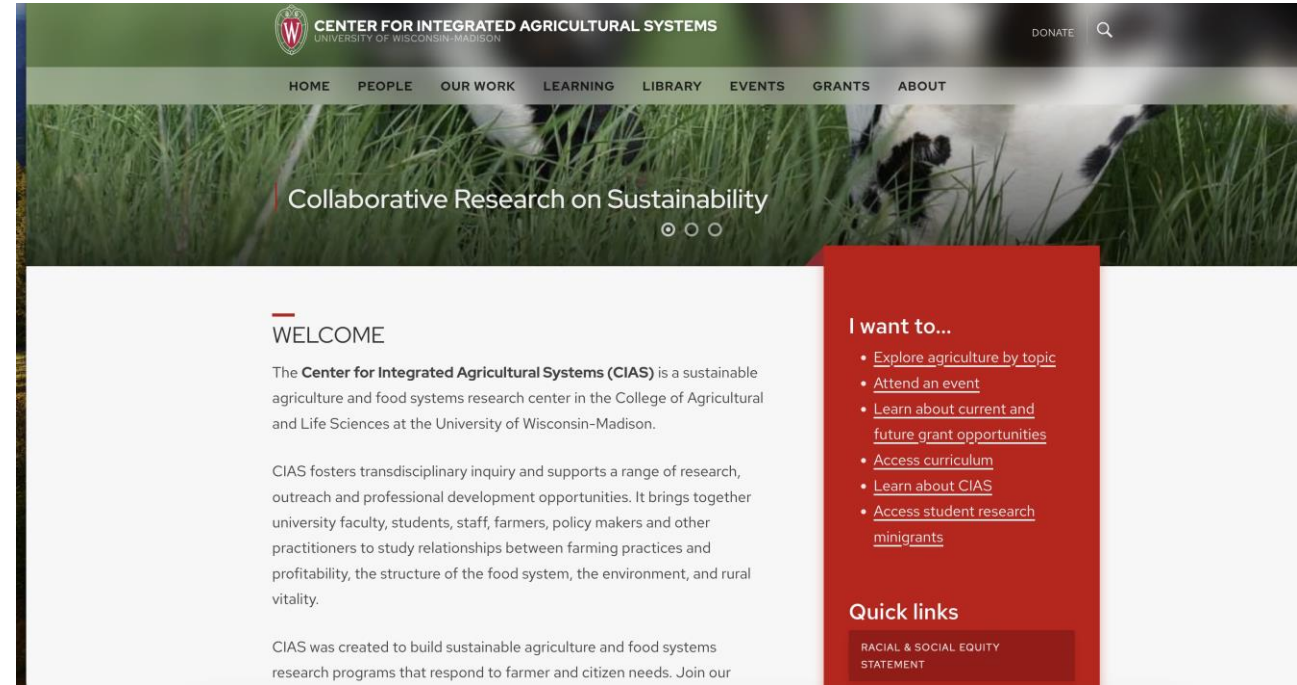
Outcomes:

- Energy Storage Database organizing participants by the potential application, storage type, and technology readiness of their work
- Critical connections



Who are we and how do we support interdisciplinary research?

- Erin Silva
 - Faculty, Organic Agricultural Systems
 - Extension-Funded Faculty
 - Director, Center for Integrated Agricultural Systems



- CIAS
 - 35 year anniversary!
 - 8 staff members
 - Long-held focus on transdisciplinary, citizen-engaged research

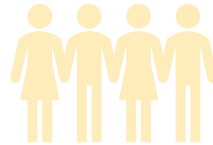


Things we do



BUILD RELATIONSHIPS!

Connect faculty across campus
Connect stakeholders across WI and beyond



Assemble teams for proposal submissions



Manage large interdisciplinary projects



Focus on
addressing
"wicked
problems"

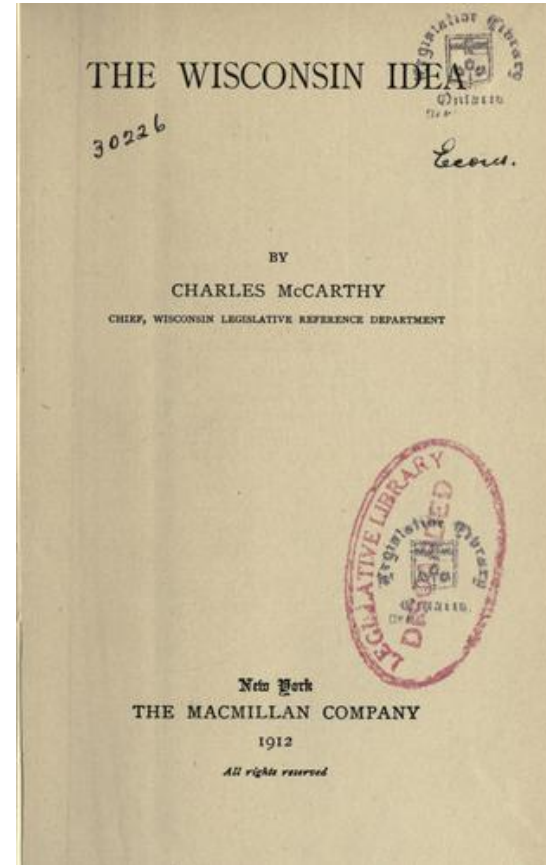
- "Wicked problems are **problems with many interdependent factors making them seem impossible to solve.** Because the factors are often incomplete, in flux, and difficult to define, solving wicked problems requires a deep understanding of the stakeholders involved, and an innovative approach provided by design thinking."
- Solutions thus require interdisciplinary, systems-based thinking and the engagement of stakeholder groups

Stakeholder-driven research and outreach

- Focus on impact - "wicked problems"
 - Improvement/change in practice
 - Policy implications



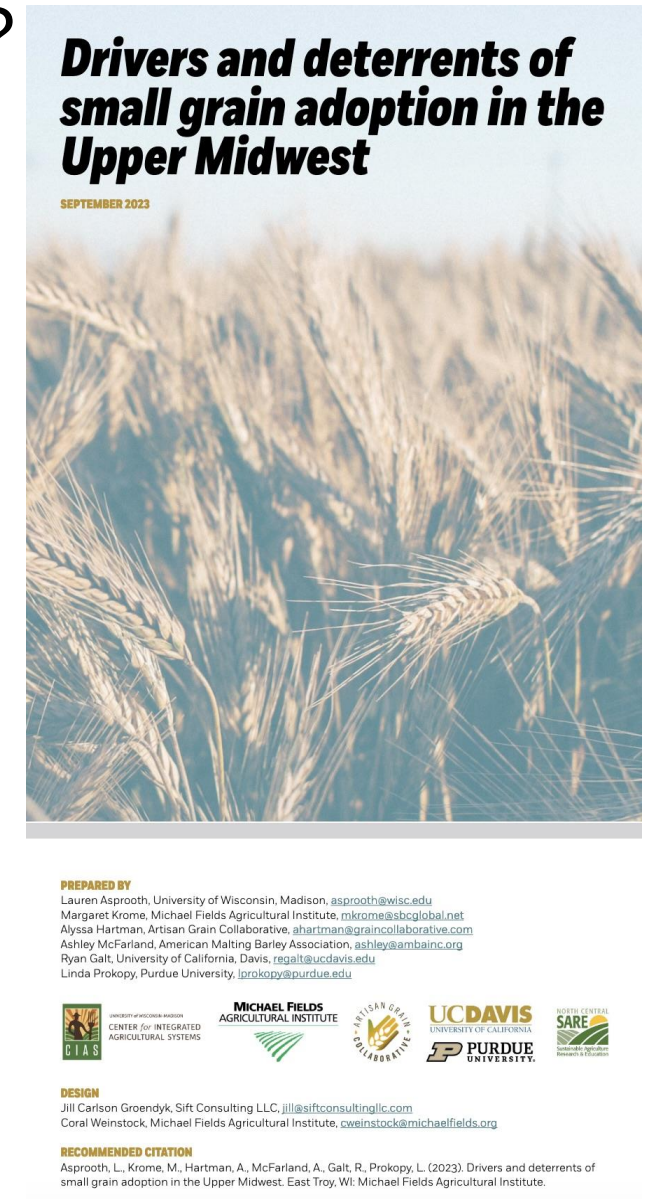
CIAS Citizens' Advisory Council



"The boundaries of the University are the boundaries of the state."

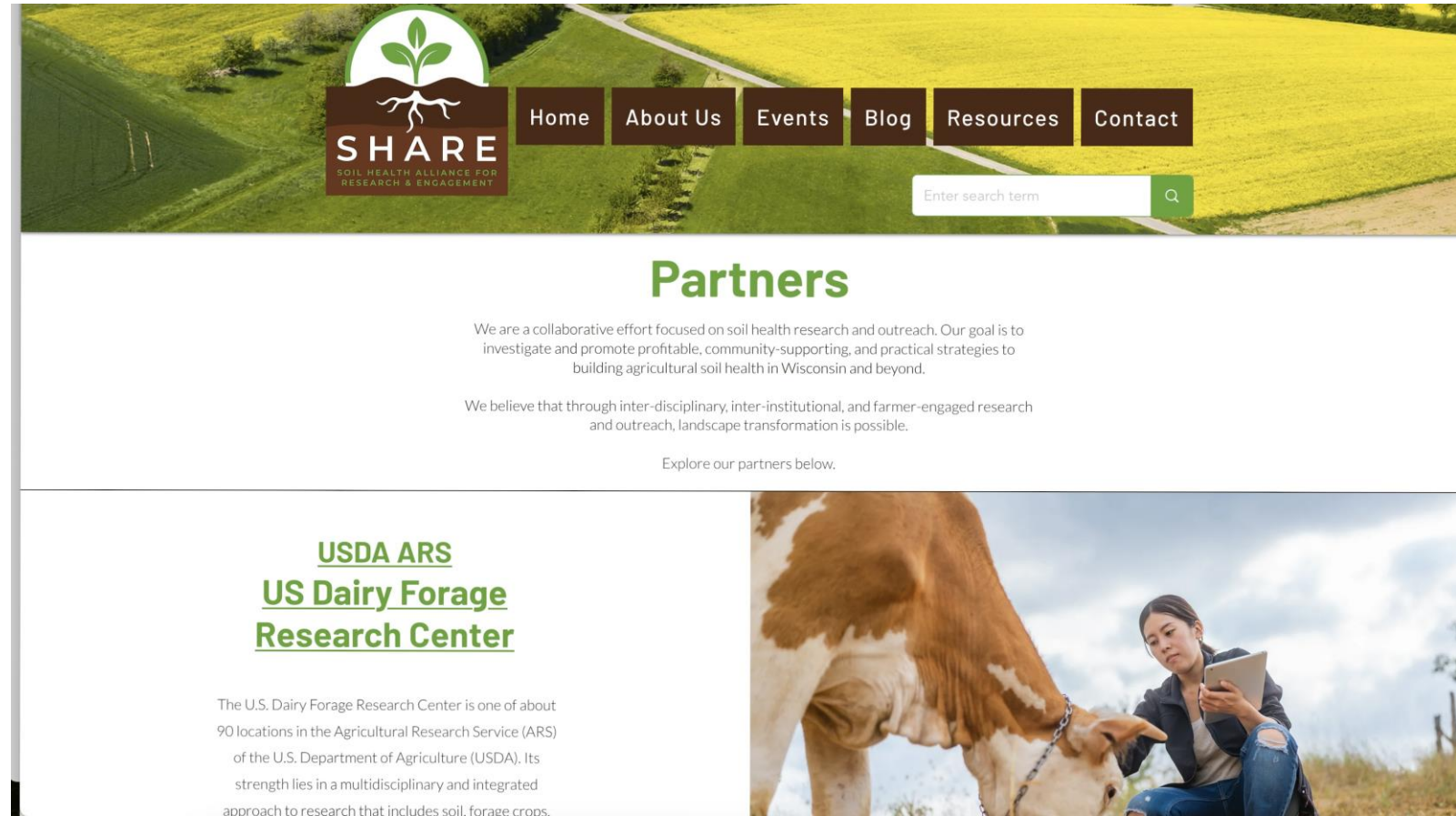


Policy Work – how do we integrate a transdisciplinary approach to guide policy solutions?



Soil Health Alliance for Research and Engagement

- Facilitation of research partnerships across CALS – economics, livestock, human health, agronomy, soil science, social dynamics
- Outreach and stakeholder engagement
- CIAS staff assist with project administration, staff expertise contributing to research and outreach



Finding Common Ground - Merging Tribal Life Ways with Modern Organic Agriculture Practices

- Project began with a planning grant (USDA Organic Research and Extension Initiative)
- Process led to submission of \$10M USDA Sustainable Agricultural Systems – Coordinated Agricultural Project proposal (funded 2024)
- Role of CIAS – stakeholder engagement, proposal submission, project management



Challenges we've seen

- Adequate funding - money goes quickly!
- Getting PIs to speak the same language and understand disciplinary norms (tenure, publications, grad students)
- "Meeting fatigue"
- True integration across projects – not going back into "siloes"
- Meaningful and continued stakeholder engagement
- Interdisciplinary publications

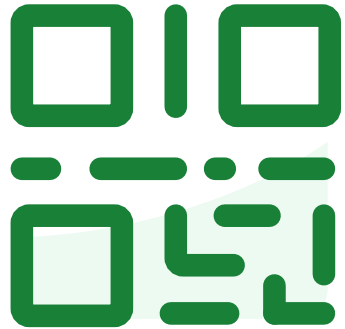


Discussion



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**Reflect: what strategies, ideas,
or approaches resonated with
you?**

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What strategies would you recommend UW-Madison use to support interdisciplinary research on sustainability?

(e.g., fostering community, building connections, incentives)

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What resources already exist at UW-Madison to support interdisciplinary research on sustainability?

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What resources are needed for UW-Madison to be successful in supporting interdisciplinary research on sustainability?

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**What do you see as areas of opportunity
for interdisciplinary sustainability
research?**

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Thank you!

Jennifer Hauxwell, Aquatic Sciences Center

Alison Mikulyuk, Aquatic Sciences Center

Adrienne Nienow, Research Impact & Outreach

Erin Silva, Plant Pathology

