

Ranch and Rangeland Resilience

Scope of Work | Issue Briefs

This document provides an overview of the objectives, process, and deliverables for five (5) white papers exploring key topics related to ranch and rangeland resilience. These papers are being commissioned by Meridian Institute as part of the Western Rangeland Data Initiative (WRDI) with funding from Walton Family Foundation and Conscience Bay Research.

Background & Purpose

The Western Rangeland Data Initiative is a multi-stakeholder collaboration made up of ranchers and producer groups, conservation organizations, businesses, researchers, and others who are interested in working together to find data-informed solutions to enhance ranch and rangeland sustainability in the West. Our approach is focused on supporting collaborative, multi-stakeholder solutions that leverage data to improve ecosystem health and ranch sustainability.

In consultation with a WRDI Advisory Group, Meridian aims to combine objective research and convenings with key stakeholders to review the current state of knowledge and discuss opportunities for innovation and solutions. The research will be led by an author or pair of authors and will synthesize the current knowledge (with no or minimal original research) on a specific topic. Meridian will share each paper with a multi-stakeholder group to develop recommendations to advance solutions. The goal of these issue briefs is to provide a foundation for exploring systems-level change opportunities, potential scenario planning, and solution-oriented conversations on the future of ranching in the context of shifting environmental and social conditions.

The **format** for each paper will vary – some will offer an objective exploration of a topic and present potential solutions, while other topics may benefit from presenting pairs of different opinions and perspectives.

The intended **audiences** for these papers include decision-makers and those looking to support the future of Western rangelands. This can include policymakers, nonprofits, funders, and landowners with an interest in food systems, climate change, and Western lands and livelihoods.

Issue Paper Topics

We are seeking authors or co-authors for a series of five (5) issue papers who will work collaboratively with the Advisory Group to produce papers. The papers are organized into two categories:

- **Current trends and the state of ranching.** We seek authors for two papers that summarize current trends and tensions influencing the current and future state of ranching in the West.

Each of these papers will have a single author, will summarize current information, and will lay a foundation for thoughtful, solution-oriented discussion of strategies for supporting rangeland health and ranch sustainability.

- **Strategies and solutions.** We are also seeking authors for three “point of view papers” where multiple authors can share their perspectives, ideas, and solutions on specific topics that are highly relevant to the future of rangeland health and ranch sustainability. For these papers we are seeking multiple authors to offer differing perspectives on the solutions being proposed. The goal of these papers is to unpack the nuance surrounding these issues and identify a menu of options for policy and other decision-makers.

Current Trends and the State of Ranching

Two of the papers will focus on the current trends and the state of ranching to characterize where the sector is going and how it might look in the future if current trends continue. We anticipate these papers will lay a foundation for discussion of specific solutions.

1. TRENDS IN RANGELAND USE AND RANCHING

This paper will explore trends in rangeland use and the ranching sector, pulling together published literature and providing a concise synthesis of changes over time and potential future directions.

Key topics and questions we hope to answer include:

- How is the use of rangeland changing over time?
- When rangelands are no longer used for livestock grazing and production, what happens?
- What are the current trends in ranch ownership and how are ranchers navigating intergenerational succession?
- What are the greatest forces influencing ranch profitability and how significant is income diversification?
- How are evolving public opinions of livestock production and meat consumption affecting ranching?

2. CLIMATE CHANGE AND WATER IN THE WEST

This paper will explore trends in environmental and climatic conditions that are influencing ranching in the West. We anticipate these questions can be answered through a combination of published literature, climate models, and other data sources. The goal is to provide a concise synthesis of changes over time and potential future directions.

This paper will have two co-authors given the range of both conditions and solutions it will explore. We expect one author will speak to climate dynamics, modeling, and projections, while another other will be more familiar with impacts and solutions.

Key topics and questions we hope to answer include:

- What do climate models say about the future of water in the West?
- What is the current understanding of the water holding capacity of rangeland and pastureland soils?
- How might changes in hydrologic conditions directly and indirectly affect ranching and water use, considering the current water rights regime and regional climate changes?
- How are changes in rangeland use impacting water resources?
- What strategies are most promising for navigating water use and availability for ranching in the West going forward?
 - What do we know about how regenerative practices contribute to watershed health and the potential to address water storage issues?

Strategies and Solutions

Three papers will then focus on some of the strategies and solutions underway and/or proposed to support rangeland health and ranch sustainability. Each of these papers should include specific exploration of how **data** supports the solution/strategy.

3. FEDERAL AGENCY CAPACITY AND TECHNICAL ASSISTANCE

This paper will explore potential opportunities and solutions for enhancing federal agency capacity and innovation in technical assistance to support ranch and rangeland resilience in an increasingly arid climate. The primary audiences are federal agencies, nonprofits, funders, companies, technical service providers, and policy/decision-makers who are interested in strengthening the support available to ranchers.

This paper will have at least two co-authors who bring complementary knowledge and perspectives on the suite of solutions. We anticipate this could be authors with familiarity with a single agency (e.g., US Forest Service) paired with an expert from a different agency (e.g., BLM or NRCS). Or it could bring a producer perspective, technical assistance provider, and an academic expert together to explore challenges, trends, and opportunities.

Key topics and questions we hope to answer include:

- Briefly, what do we know about federal agency capacity that might impact ranchers (i.e., BLM, USFS, NRCS, etc.)? How many positions are currently vacant in the US? What are the challenges agencies face in filling those vacancies?
- What are options for strengthening federal agency capacity in the form of innovative programs, partnerships, funding, and/or technical assistance to support ranch and rangeland resilience?
 - What are specific models of public-private partnerships or solutions underway?
- Where are opportunities to support culture and capacity change to result in improved agency/producer relationships? What circumstances enhance federal staff flexibility, adaptability, and solution-finding?

- What funding sources, models, or other financial incentives can support public-private strategies for technical assistance? Is there an opportunity for pooling funding from multiple sources (e.g., federal, state, private sector and foundations)?

4. REMOTE SENSING

This paper will explore current capabilities and limitations of remote sensing technology to understand rangeland health and inform ranch-level management. The audiences for this paper are ranchers, consultants, public land managers, technical service providers, policy/decision-makers, funders, and technology developers who might be looking for a well-rounded understanding of the opportunities and limitations of remote sensing.

This paper will have two co-authors. Potential co-authors could bring a range of knowledge and perspectives on the utility of the existing technology (e.g., an author who is an advocate paired with one who is skeptical) or from different sectors (e.g., consultant, producer group, and/or academia).

Key topics and questions we hope to answer include:

- To what extent can remote sensing be used as a rangeland health monitoring tool?
 - For which audiences, for what purposes, and at what scales?
 - What reliable information can it provide?
 - What type of decision-making can it (and can it not) support with the greatest potential for near-term impact?
 - Does its utility change in combination with other technologies (e.g., virtual fencing) or data-gathering approaches (e.g., ground truthing)?
- What are its current limits and how are these limits being addressed?
- What concerns do people have about data sharing and what are best practices for protecting data privacy?

5. ECOSYSTEM SERVICE MARKETS

This paper will explore two key topics related to data and ecosystem service markets for ranchers in the West – the data, research, and/or infrastructure needs to support robust ecosystem service markets and the market demand for ecosystem services from potential agricultural corporate buyers. The audiences for this paper are ranchers, researchers, technology companies, and the entities designing ecosystem services markets.

This may be two separate papers, or a single author could address both topics.

Key topics and questions we hope to answer include:

- What data, research, or data infrastructure is needed to support robust ranch-related ecosystem service markets? (We anticipate this will be an exploration of 3-7 specific ideas related to data and ecosystem services.)

- E.g., Could traceability drive incentives for sustainable production practices and ecosystem markets (as well as other benefits, such as animal welfare, food safety, etc.)? What are producer perspectives on traceability (questions, concerns, opportunities)?
- What are the current perspectives of potential corporate buyers interested in investing in ranch-related ecosystem services markets or other beef-related marketplaces?
 - What questions do they have and what information would they like to see to inform investment decisions?
 - What are the most immediate opportunities to “unlock” investment and build buyer confidence in ranch-related ecosystem service markets?

Process and Deliverables

Each paper should be 5-7 pages. It will be concise and use straightforward language, avoiding technical jargon while still not shying away from complexity. The goal is to synthesize the state of knowledge on each topic, highlight key outstanding questions, and point to potential solutions or recommendations.

We ultimately want the papers to be useful and prompt discussion among a multi-stakeholder group, so have structured a process to incorporate oversight and consultation from **the Western Rangeland Data Initiative Advisory Group**. The Advisory Group will provide feedback twice throughout the drafting process (either by email or a virtual meeting) but will not influence research findings or outcomes. Advisory Group members include:

- Producers and producer groups, including a variety of types of ranchers
- Researchers
- Technical assistance providers
- Conservation NGOs

Below is a brief summary of the anticipated timeline. We have some flexibility for individual authors for specific interim deliverables, but final products need to be completed **by Monday, December 2, 2024**.

TASK	TIMELINE
Authors selected.	End of September
Initial consultation with Advisory Group.	October
First draft or outline due. The Advisory Group will review and provide written feedback on a first draft or detailed outline (1 week review window).	End of October

Final report due.	December 2, 2024
Presentation on report findings. We plan to host a small convening to discuss findings and identify actions or recommendations based on what we have learned. The authors are expected to give a brief presentation on their findings and be available to discuss implications and ideas.	TBD, Fall 2024 or early 2025

Compensation

Each author will be compensated \$5,000 USD.

The authors are not responsible for graphic design for the final report. If travel is required to attend the presentation of the final report, Meridian can cover travel costs directly. Meridian staff are also available to support the authors by facilitating engagement with the Advisory Group and other project management.

How to Apply

Interested parties should submit their application to Sara Schmidt (sschmidt@merid.org) by **COB Tuesday, September 10, 2024**.

- Resume or CV describing background, qualifications, and similar previous assignments.
- Two samples of previous work (URLs are fine), especially those reflecting a consultative writing process.
- A short (1-2 paragraph) description of how you would approach the topic (i.e., would this be a synthesis of existing research, an overview of the topic, a paired perspective or discussion document). We anticipate our authors will be experts on the topic and welcome your ideas for how to make sure these reports are insightful and spark solutions-oriented conversations.

If you are interested in serving as a co-author for one of the solutions papers, you can submit your individual credentials with or without identifying co-authors. If you are submitting individual credentials, please share a few ideas of what type of co-author might bring a balanced perspective to the topic. Potential co-authors are also welcome to jointly apply.

We hope to finalize authors by Friday, September 27, 2024.