North American Bird Conservation Initiative

Human Dimensions Subcommittee



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HD Subcommittee

NABCI's Vision: *Healthy and abundant populations of North American birds that are **valued by future generations** and sustained by habitats that **benefit birds and people**.*

Subcommittee Goal:

Enable bird conservation partners to integrate human dimensions science and tools into bird conservation efforts

HD Subcommittee Membership

National Bird Conservation Social Science Coordinator

Ashley Gramza

Jessica Barnes

HD Subcommittee 2019-2020 Work Plan

Goal: Enable bird conservation partners to integrate human dimensions science and tools into bird conservation efforts

Action 1. *Support and connect the human dimensions efforts of NABCI partners across scales, regions, and bird taxa*

Action 2. *Strengthen social science capacity and facilitate the integration of social science into bird conservation by developing, supporting, and sharing human dimensions resources and trainings*

Action 3. *Share and translate the implications of social science research for bird conservation practice*

HD Subcommittee 2019-2020 Work Plan

Action 1. Support and connect the human dimensions efforts of NABCI partners across scales, regions, and bird taxa

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a. Liaise between NABCI and other bird or wildlife-related human dimensions teams

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a. Liaise between NABCI and other bird or wildlife-related human dimensions teams

b. Support the integration of human dimensions into the work of the Joint Ventures, continental bird conservation plans, and Flyways by participating in the Unified Science Team (UST) Theme Team on HD Integration

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HD Subcommittee 2019-2020 Work Plan

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c. Assist bird conservation partners in developing social science research and surveys with broad transferability: help frame the problem, connect researchers and practitioners, review research proposals and instruments

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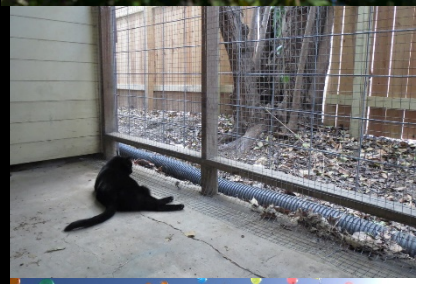
AZA Survey

Exploring Conservation Actions in Support of North American Migratory Songbirds



TEST PHASE Identify project objectives and methods

PHASE 1 *(In progress – Summer 2019)*
Survey zoo guests to understand levels of knowledge and interest related to migratory birds and feasibility of different conservation actions; *16 participating institutions*

PHASE 2 Create and prototype actions

PHASE 3 Evaluate actions among zoo and aquarium guests

PHASE 4 6-12 month follow-up to evaluate action adoption

HD Subcommittee 2019-2020 Work Plan

Action 2. Strengthen social science capacity and facilitate the integration of social science into bird conservation by developing, supporting, and sharing human dimensions resources and trainings

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HD Fact Sheet

Understanding Humans to Conserve Birds

Bird conservation fundamentally includes humans, and the most successful conservation actions are those aligned with the values, well-being, and perspectives of people. When conservationists work to conserve birds, they are often trying to change or reinforce human behavior. Therefore, studying and understanding the human dimensions of bird conservation are essential to develop effective bird conservation strategies.

Flooded rice fields in Arkansas benefit birds and farmers.
Mike Checkett

What is Human Dimensions?

Human dimensions (HD) is a field of study that applies the social sciences to examine research questions that have implications for wildlife conservation efforts.

Integrating Social and Ecological Understanding Increases Success

Combining expertise from the fields of human dimensions and ornithology can improve bird conservation approaches and outcomes. It can lead to a better understanding of why people implement conservation actions or support funding for habitat conservation. It can also help inform where actions should be taken to benefit birds.

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Guidance Document

Incorporating Human Dimensions into Joint Venture Implementation Plans

By Ashley Dayer[1], Ashley Gramza[1,2] and Jessica Barnes[1,2]

[1]Virginia Tech, Department of Fish and Wildlife Conservation

[2]North American Bird Conservation Initiative

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Understanding Human Dimensions

Human dimensions, defined most broadly, refers to "**everything in conservation that is not about wildlife and habitats**" (adapted from Decker, Riley, & Siemer 2012). This includes the cultural, legal, political, economic, and social constraints and opportunities that influence both the status of wildlife populations and the feasibility and success of conservation efforts. Human dimensions can also be understood as **an interdisciplinary field of study that applies various social sciences to examine research questions that have implications for the management and conservation of wildlife** (Manfredo 2008; Bennett et al. 2017). HD theory and research incorporate many other disciplines, including those shown in **Figure 1**, and often combine these social sciences with insights from the biological sciences.

Figure 1. This figure shows various social science fields that contribute to the applied field of human dimensions.

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Why HD Information is Integral to Achieving JV Conservation Goals

Integration of HD includes exploring what people think and do related to conservation, incorporating that understanding into decision-making about conservation policies and programs, and evaluating the impact of those efforts on both human behavior and conservation targets. Comparable to biological information, **HD information can be a valuable addition in every phase of the Strategic Habitat Conservation (SHC) work of JVs, from research and planning to design, delivery, monitoring, and evaluation** (**Figure 2**). HD thus can and should be a component of an adaptive management process. HD research, particularly when it involves forms of stakeholder engagement, can also help JVs develop ecologically- and socially-informed goals (Sexton et al. 2013).

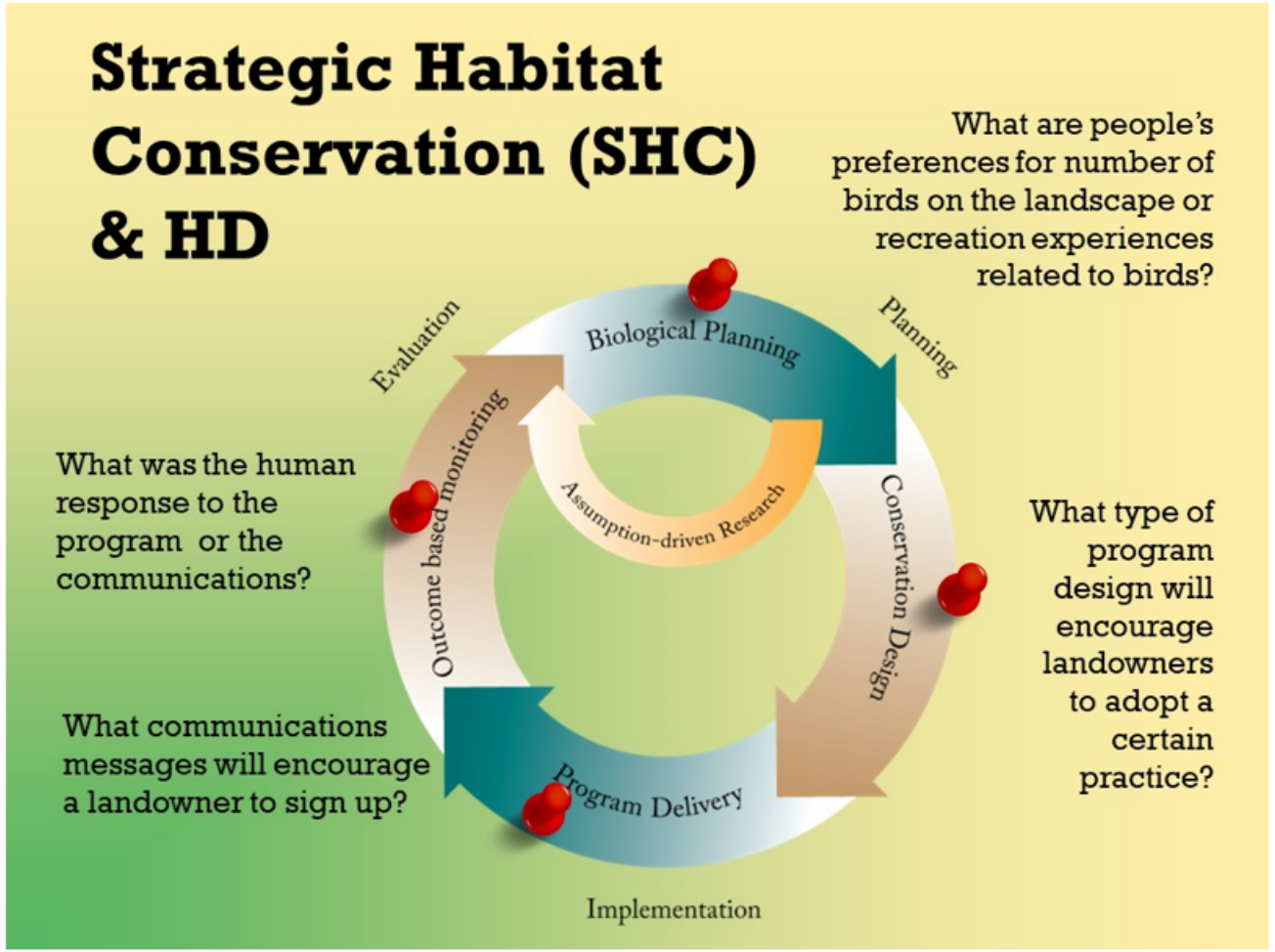

Figure 2. HD research can help improve all aspects of the work of a Migratory Bird JV (Dayer & Meyers 2016).

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Sources of Existing HD Information

Historical contexts, including the land use, settlement, and cultural history of people within the JV, can help JVs better understand how people in the region relate to birds and bird conservation and how they have responded to bird conservation issues or management actions in the past. This history can inform how JVs engage with communities on contemporary issues. Knowledge of the historical context of an area can also facilitate the identification of groups who may have knowledge about particular birds or ecosystems or a stake in conservation programs. For example, understanding the history of land tenure in a region might bring to light indigenous or other groups that historically used or managed the species and have knowledge about its past or present status.

Sources: Historical documents and books, local environmental history publications

Governance structures, including federal, state, county, and municipal policies, as well as formal and informal rules and social norms, shape how people interact with nature and wildlife. Awareness of the constraints and opportunities created by these structures will help JVs design more effective bird conservation programs. JVs can also incorporate policy-related strategies into their implementation plans, in an effort to influence policies that impact birds and bird habitats.

Sources: Local and regional government documents such as Council meeting minutes, ordinances, building and zoning codes, and tax documents

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Social contexts, particularly people's connection with and beliefs about nature and wildlife, set the backdrop for all bird conservation efforts. What people believe about the relationship between humans and the natural world; the barriers they face in engaging in wildlife recreation or conservation behaviors; and the experiences they have had with wildlife influence public support for conservation and can thus impact the success of JVs. Importantly, these relationships differ across races, ages, geographies, and political affiliations, and they have changed over time. Considering these shifting social contexts will make it possible for JVs to communicate with people in terms that matter to them and to identify approaches to bird conservation that are consistent with public values.

Sources: National social science studies including The Nature of Americans and America's Wildlife Values (especially state-level reports)

Wildlife recreation information can help JVs understand trends in recreation participation in their regions, including how people spend money, how they participate in conservation, and what controls satisfaction with outdoor recreation opportunities. This HD information can inform the development of JV strategies that work with and for recreationists, especially those who engage in bird conservation-related recreation (i.e. hunting and birdwatching).

Sources: National Survey of Fish & Wildlife Related Recreation (including topical reports & state reports); NAWMP survey of hunters, birdwatchers, and the public; visitor surveys and recreation plans from federal lands in the region (especially National Wildlife Refuges)

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JV Examples along the Spectrum of HD Integration

Spatializing socioeconomic data for targeted outreach

Oaks and Prairies Joint Venture (OPJV) partners conducted a **Human Landscape Assessment** by **intersecting GIS-based grassland bird habitat and socioeconomic data**. OPJV staff working with **university partners** did this by initially selecting clusters of parcel property that contained at least 100 acres of upland grassland habitat. They then **identified groups of people who had similar values on a variety of socioeconomic data indicators** to those already participating in a private lands conservation program, the Grassland Restoration Incentive Program (GRIP). These zip code-based socioeconomic data indicators included factors such as income, education, and participation in consumptive and non-consumptive outdoor recreation activities. The assumption is that **selected landowner clusters would be more likely to participate in GRIP and other conservation programs**; thus, bird conservation practitioners could increase enrollment in these programs in the future to meet objectives identified in the OPJV Grassland Bird Conservation Business Plan (https://www.opjv.org/about_us) by targeting these identified landowners. OPJV staff are currently working with the Texas Parks and Wildlife Department to add a **High Opportunity Outreach Program** by using a **mail survey to validate and calibrate the spatial model** of potential landowners in one of our 40 focal counties as a proof of concept project to guide future work.

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Writing a Human Dimensions Chapter

1. Find human dimensions collaborators

We encourage JVs to **work with HD professionals to interpret and integrate HD information** into implementation plans. These experts can provide advice on social science content to include and suggestions for where to find this information. Depending on your budget, you may be able to hire a social scientist as a consultant to conduct research to help determine your JV's HD needs and write the chapter. Alternatively, you can **partner with HD researchers** or **consider adding HD professionals to your management board** or science advisory team.

2. Identify your human dimensions issues

3. Explore the HD literature and existing information on relevant HD topics

4. Determine what insights you can take from existing sources to inform your strategies

5. Prioritize your future human dimensions needs

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a. Partner with US FWS, the UST, Joint Ventures, and the Atlantic Flyway Shorebird Initiative to offer or support HD training opportunities through workshops and webinars

b. Promote use of Subcommittee products and other HD resources; continue to distribute resources and improve mechanisms for sharing with the bird conservation community

c. Lead development of a series of Relevancy Success Stories featuring non-traditional partnerships that have benefited human communities and birds; collaborate with the Private and Working Lands and Communications Subcommittees to collect and communicate stories

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HD Success Story Map

http://nabci-us.org/success-stories/

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HD Success Story Map

Bird Conservation Human Dimensions Success Stories

NABCI

Relationships Between Bird Conservation Professionals and Landowners Important to Conserve Golden-winged Warblers

Human dimensions researchers studied landowner willingness to continue managing for young forest habitat after participation in cost-share programs that benefit Golden-winged Warblers and other wildlife species.

More info


1 Changing Dog Owner


2 Human Behavior Increases


3 Relationships Between Bird


4 Satisfaction, not Payments,


5 Science and Outreach


6 Human Geographic Data

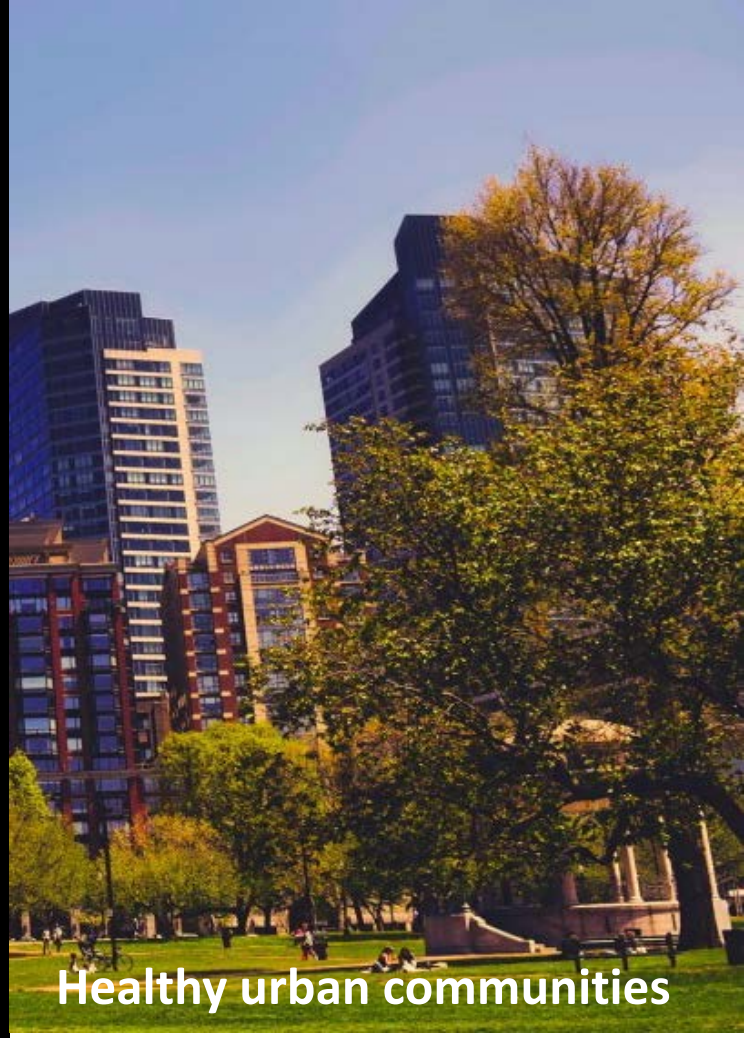

7 Human Dimensions

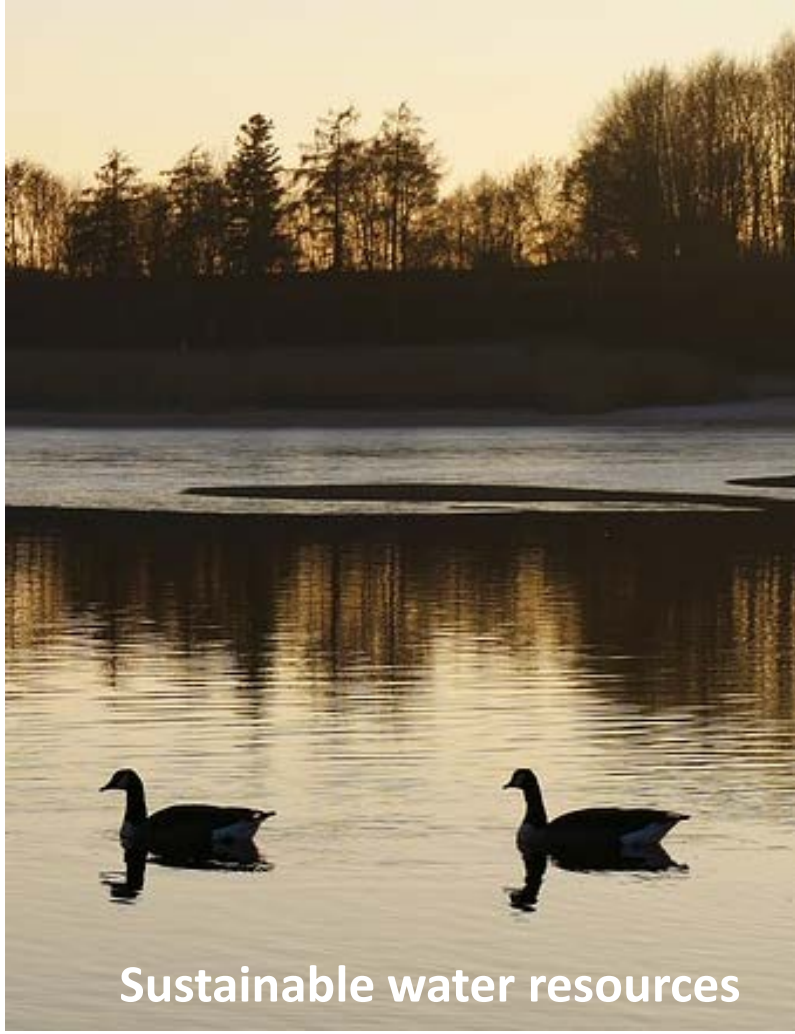
HD Success Story Map

Relationships Between Bird Conservation Professionals and Landowners Important to Conserve Golden-winged Warblers

Golden-winged Warbler using young forest habitat. Photo courtesy of D.J. McNeil.

Relevancy Success Stories





*Collating stories in which bird conservation organizations have forged **non-traditional partnerships** in order to generate benefits for both **human communities** and **birds***

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Action 3. Share and translate the implications of social science research for bird conservation practice

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HD Subcommittee 2019-2020 Work Plan

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a. Collaborate with AK Department of Fish and Game, Division of Subsistence to organize a symposium at the 2019 AOS meeting highlighting social science in bird conservation

AOS Symposium

US FWS

Why do bird conservation and ornithology ***need social science****?*

Building social science capacity in the bird conservation community: ***Partnerships, priorities, and practices***

America's Wildlife Values: How ***values lead to challenges and opportunities*** *for bird conservation*

Understanding underserved audiences *to ensure ongoing long-term citizen science data collection*

Quantifying the stability of birds' cultural niches: ***changing public perceptions*** *of the North American avifauna*

Minimizing all-terrain vehicle impact in bird habitat: ***Reconciling harvest and conservation*** *on private land in Western Alaska*

Land trusts and birds: ***Partners in strategic conservation***

Human dimensions applications in shorebird ***subsistence harvest and Indigenous Knowledge*** *in Alaska*

Cross-cultural considerations *in wildlife management and conservation*

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Pathways Conference

Transforming Engagement in Wildlife Conservation I and II

A two-part session at *Pathways: Human Dimensions of Wildlife Conference*

Estes Park, Colorado • September 22-26, 2019

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d. Conduct survey to explore birdwatcher behavior and involvement in conservation funding

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e. Conduct research and stakeholder engagement to aid the VA DGIF engage birders and wildlife viewers; share findings with the bird conservation community

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Virginia DGIF Project

Understanding and engaging wildlife recreationists

Focus groups **Online survey** **Stakeholder analysis**

Wildlife Viewing Plan

Stakeholder Advisory Committee + Technical Advisory Committee

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f. Translate research on the persistence of private lands conservation after incentives end; coordinate with local partners to facilitate implementation

CRP Project

CRP in the Playa Lakes Region:

Understanding motivations and needs to cultivate participation, retention, and ongoing stewardship behavior

PLAYA LAKES JOINT VENTURE

FSA FARM SERVICE AGENCY

VIRGINIA TECH

USGS

Bird Conservancy of the Rockies

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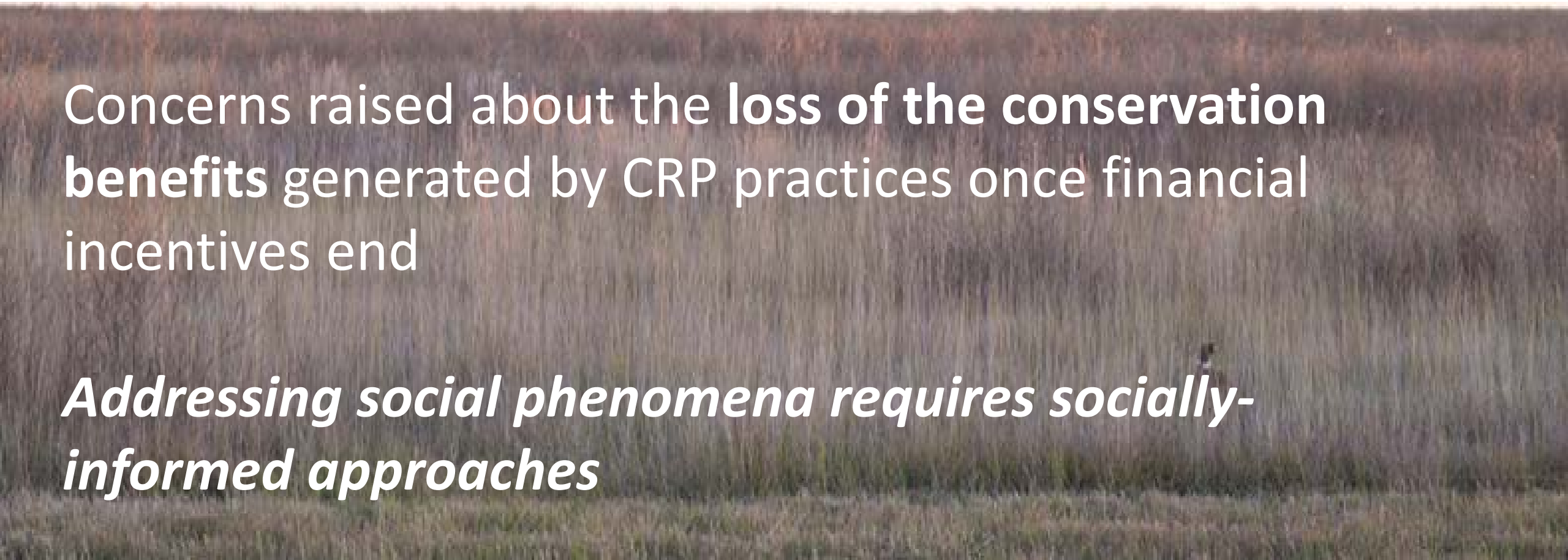
The Conservation Reserve Program

22.5 million acres; **shifting enrollment capacity** over 30+ year history

Only 22% of the acres offered for enrollment in the general sign-up were **accepted** in 2016 (Johnson, 2017)



Concerns raised about the **loss of the conservation benefits** generated by CRP practices once financial incentives end

Addressing social phenomena requires socially-informed approaches

CRP in the Playa Lakes region

A **wide spectrum** of CRP enrollment rates

Important for the conservation of **grassland bird habitat**

Large number of **acres due to expire** in the next few years

Grasslands **highly susceptible to conversion** to cropland and other development

Landowner decision-making

Persistence

"Continuation of a course of action or behavior"

Adopt with incentive

Not adopt

Continue enrollment (retention)

End enrollment (dropout)

Incentive payments stop

Continue practice (persistence)

End practice (reversion)

From Dayer et al. (2018)

A mixed-methods, social science approach

Qualitative Data

Interviews and participant observation

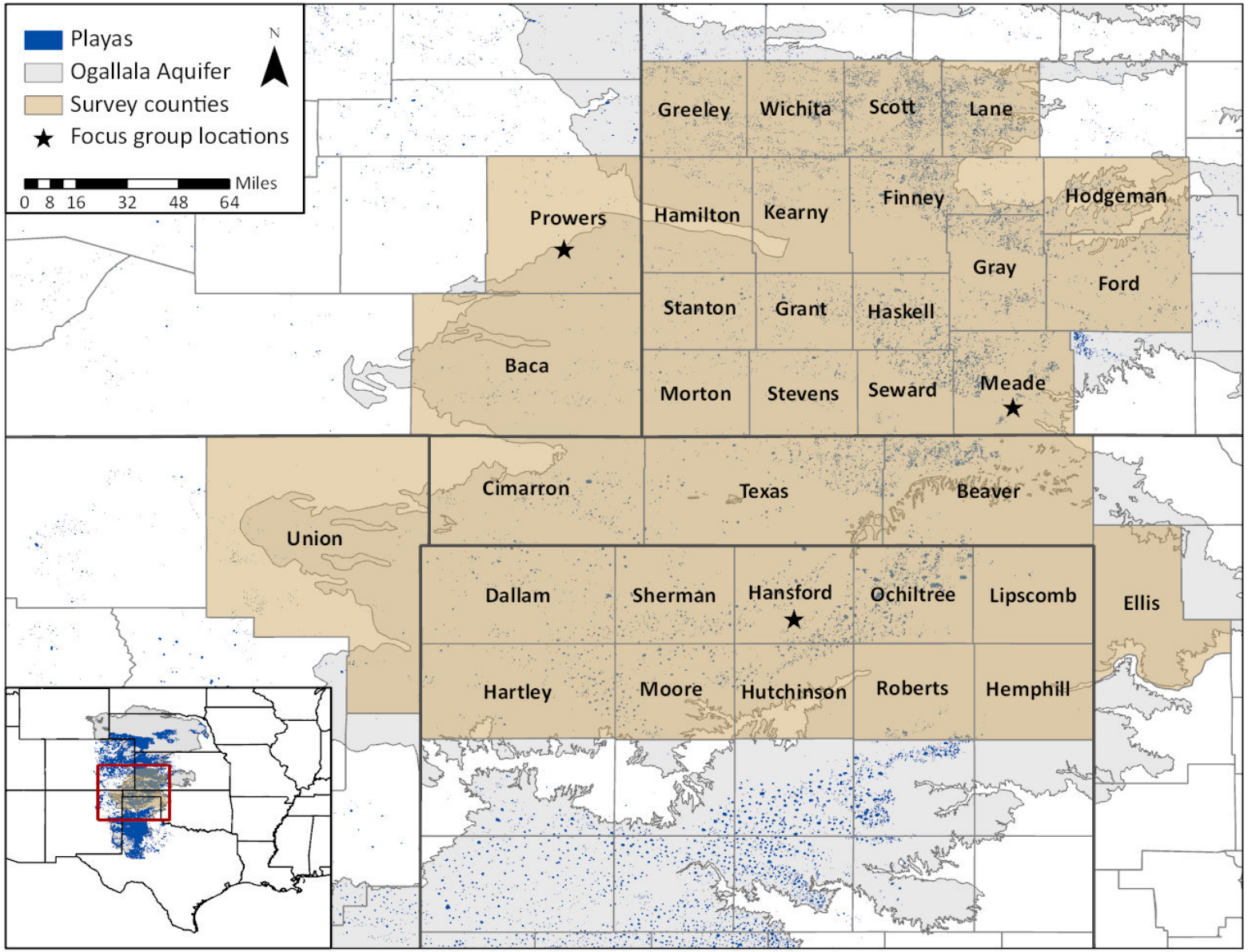
Focus groups

+

Quantitative Data

Mail surveys

(Former & current participants)



Key Findings

What happens when CRP contracts end?

Landowners want to re-enroll in CRP, but many are not able to.

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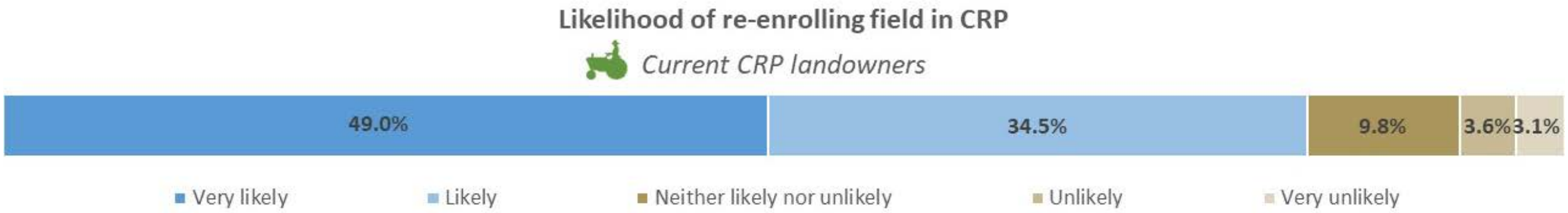

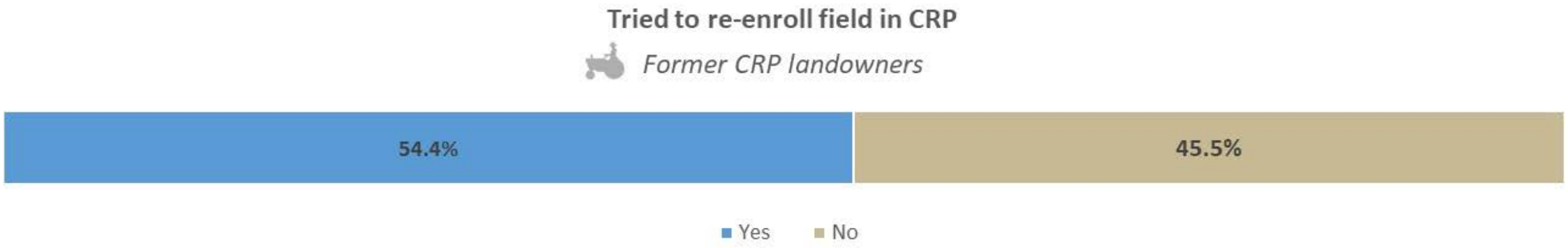

When re-enrollment is not an option, substantial expired acreage is likely to be left in grass.

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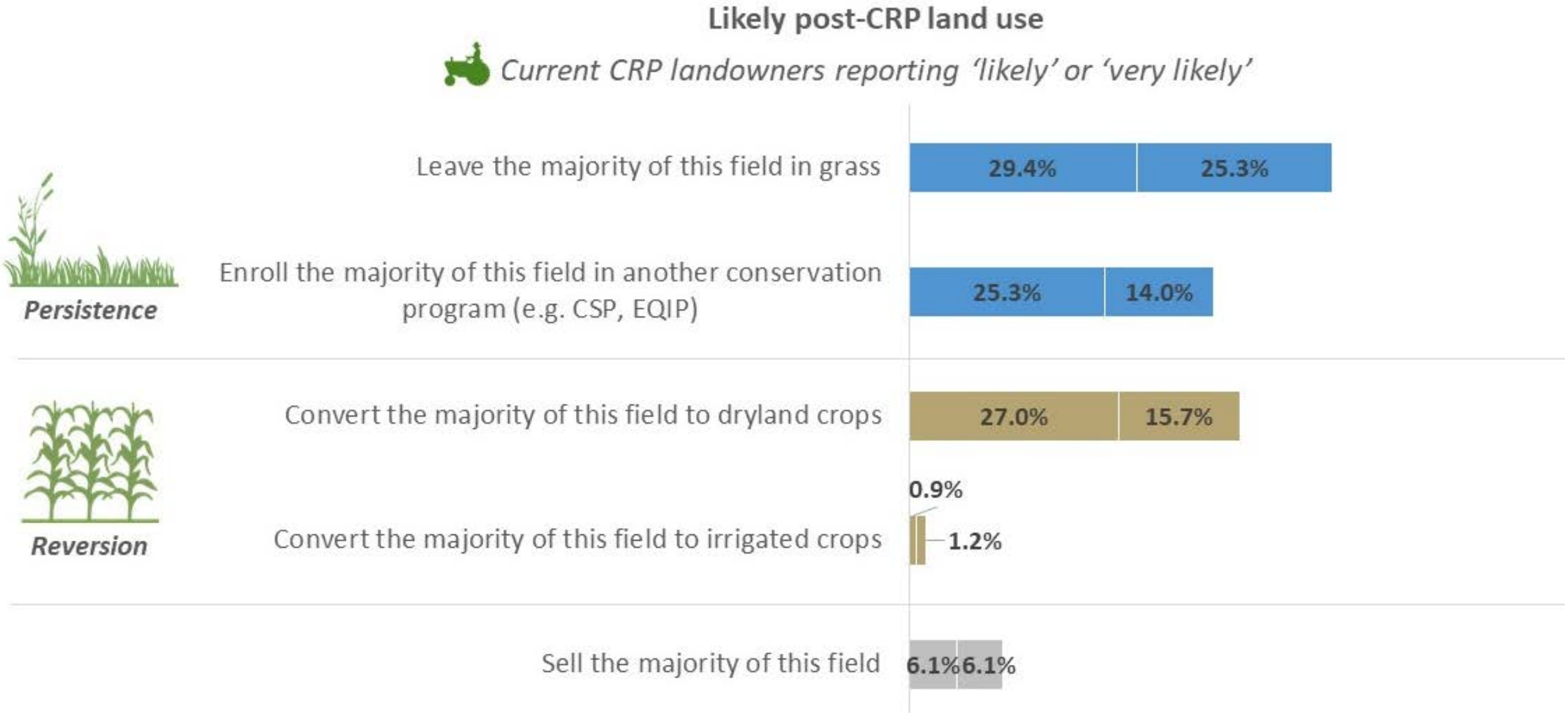

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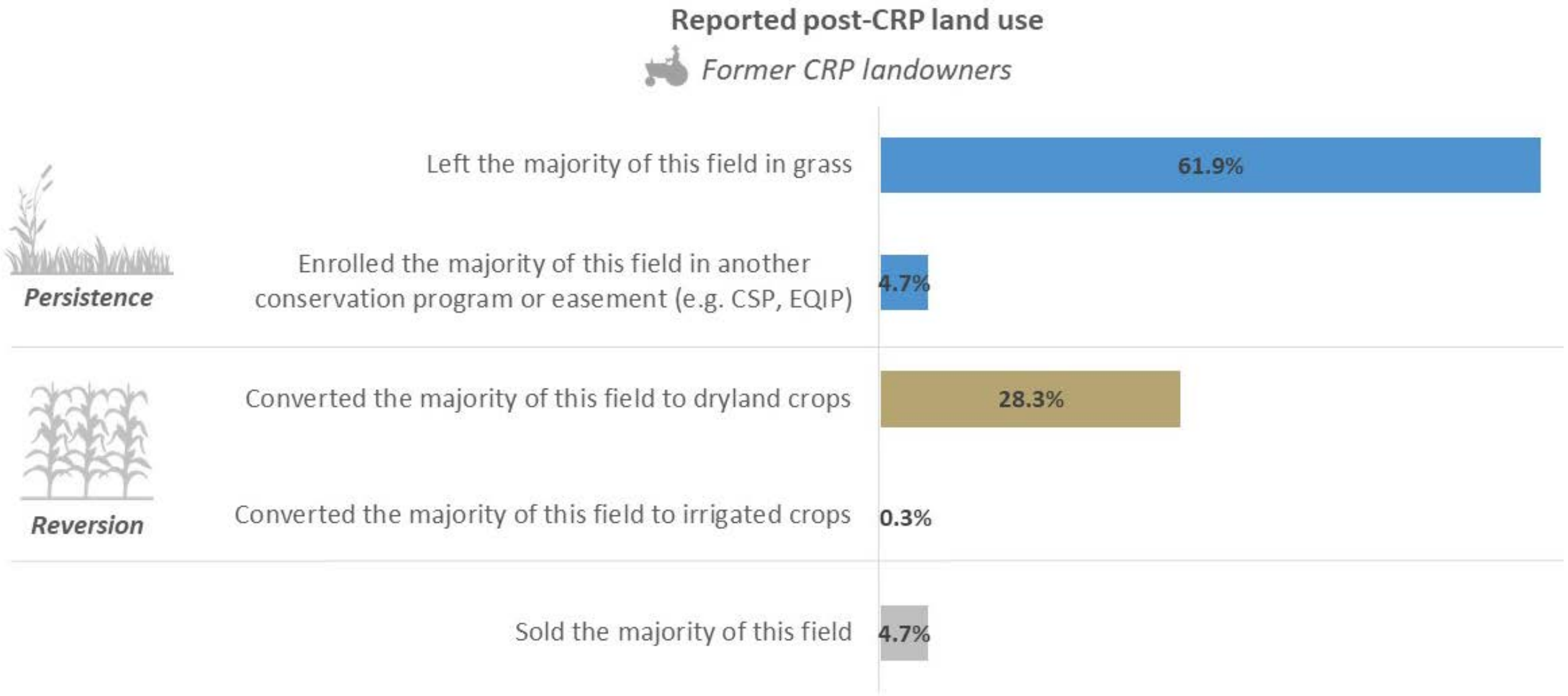

However, persistence appears to decline over time.

However, persistence appears to decline over time.

Year	% persistence
2011	66.7
2012	51.9
2013	61.8
2014	74.4
2015	85.2
2016	82.1
2017	97.1

Key Findings

What explains conservation persistence?

Pathways to Persistence (Adapted from Dayer et al., 2018)

1. Cognitions
2. Resources
3. Motivations
4. Habits (status quo bias)
5. Social influences

Each of the five pathways -- cognitions, resources, motivations, habits (or status quo bias), and social influences -- predict persistence to some extent.

Predictors of persistence intentions *(current participants)*

Persistence intentions are positively associated with:

- **Positive experiences** with the program ($r_{pb} = 0.136$)
- **Trust** in CRP personnel ($r_{pb} = 0.135$)
- **Environmental attitudes** about agriculture (r_{pb} 0.202)
- **Motivations** including an interest in improving forage quality ($r_{pb} = 0.221$), increasing grazing land ($r_{pb} = 0.233$), and improving non-huntable wildlife habitat ($r_{pb} = 0.238$)
- Perceived ease ($r_{pb} = 0.267$) and desirability ($r_{pb} = 0.448$) of **status quo**
- The **precedent** established on other expired fields ($r_{pb} = 0.178$)

Predictors of reported persistence *(past participants)*

Persistence is positively associated with:

- Available **resources** (cattle, water, equipment) (r_{pb} = 0.193)
- **Motivations** including an interest in improving forage quality (r_{pb} = 0.376), increasing grazing land (r_{pb} = 0.432), and preventing soil erosion (r_{pb} = 0.319)
- Perceived ease (r_{pb} = 0.171) and desirability (r_{pb} = 0.206) of **status quo**
- The **precedent** established on other expired fields (r_{pb} = 0.205)

Persistence is negatively associated with:

- **Business-oriented attitudes** about agriculture (r_{pb} = -0.146; r_{pb} = -0.135; r_{pb} = -0.148)
- Motivation to **maximize profit** (r_{pb} = -0.261)

Post-CRP land use is also predicted by re-enrollment intentions or decisions.

Post-CRP land use is also predicted by re-enrollment intentions or decisions.

	Likely post-CRP land use	All current (%)	Likely to re-enroll (%)	Not likely to re-enroll (%)
Persistence	**Leave the majority of this field in grass**	54.5	58.0	36.4
	Enroll the majority of this field in another program	39.0	42.5	20.8
Reversion	**Convert the majority of this field to dryland crops**	43.1	39.7	59.6
	Convert the majority of this field to irrigated crops	2.1	1.8	3.8
	Sell the majority of this field	11.6	11.3	13.2

Post-CRP land use is also predicted by re-enrollment intentions or decisions.

	Reported post-CRP land use	All former (%)	Tried to re-enroll (%)	Did not try to re-enroll (%)
Persistence	Left the majority of this field in grass	61.9	69.9	54.1
	Converted the majority of this field to dryland crops	28.3	20.9	34.8
Reversion	Enrolled the majority of this field in another program	4.7	4.9	5.2
	Converted the majority of this field to irrigated crops	0.3	0.0	0.0
	Sold the majority of this field	4.7	4.3	5.9

Recommendations for CRP design and delivery

Increase support for sustainable haying and grazing.

Increase support for **sustainable haying and grazing**.

Evaluate mechanisms for meaningful local-level input.

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Evaluate mechanisms for meaningful **local-level input**.

Align outreach and messaging with landowner motivations.

Increase support for **sustainable haying and grazing**.

Evaluate mechanisms for meaningful **local-level input**.

Align outreach and messaging with **landowner motivations**.

Aid the transition to other conservation programs.

Next steps: Translating the results

Report **downloaded 1,828 times**

Sharing research and recommendations through **publications**, national **webinars**, and partner networks; also in formats that are **accessible to landowners**

In-person work sessions in each state where research was conducted and the FSA national office; develop **specific recommendations** and **aid implementation**

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FSA FARM SERVICE AGENCY

VIRGINIA TECH

USGS

Bird Conservancy of the Rockies

Join us!

Monthly calls: 2nd Tuesday of each month @ 3pm (ET)

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