

U.S. FOREST SERVICE'S SHARED STEWARDSHIP STRATEGY: AN ASSESSMENT OF
EARLY IMPLEMENTATION IN THE EASTERN UNITED STATES

by

DESTIN D. KEE

(Under the Direction of Jesse B. Abrams)

ABSTRACT

The Shared Stewardship strategy embraced by the United States Forest Service (USFS) emphasizes partnerships with states, tribes, and other partners to coordinate work across jurisdictions and leverage capacities to accomplish landscape-scale restoration. The Forest Service and states are in the early stages of translating the strategy into action, building upon existing state and regional efforts and partnerships. This research effort seeks to assess the opportunities and challenges associated with the Shared Stewardship strategy and a comparative analysis of implementation in the eastern United States. It does so via synthesizing experiences and recommendations from semi-structure interviews conducted with key stakeholders. Our findings indicate actors have utilized existing programs and partnerships to set the groundwork for Shared Stewardship. Changes were relatively modest, centered around enhancing coordination and inclusive representation. In presenting these results, we hope this document will be useful for academics and practitioners seeking to understand initial Shared Stewardship efforts.

INDEX WORDS: USFS, Shared Stewardship, Partnerships, Collaboration

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B.S.F.R, University of Georgia, 2016

A Thesis Submitted to the Graduate Faculty of The University of Georgia in Partial Fulfillment of
the Requirements for the Degree

MASTER OF SCIENCE

ATHENS, GEORGIA

2022

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May 2022

To my dear fiancé and best friend, Wesley. This journey would not have been completed, let alone have begun, without his undying love and support.

ACKNOWLEDGEMENTS

Throughout the past two years I have likened my thesis work to a mountainous hike during which I have experienced many wonderful peaks and endured some tribulations in valleys. Although a ‘solo’ accomplishment, the completion of this thesis is largely due to the support and encouragement of many individuals. First and foremost, I cannot express enough gratitude to Dr. Jesse Abrams who agreed to take me on as a graduate student and who allowed me to find my own path in the wilderness while patiently guiding me back to the trail when necessary. More importantly, Jesse imparted his extensive knowledge and insight on social science and qualitative research, developing my intellectual knowledge in a field that was previously foreign. I would also like to thank my other team members on this project, Dr. Courtney Schultz, Dr. Heidi Huber-Stearns, Chad Kooistra, and Tyler Aldworth. Their guidance and patience proved to be more valuable than I could have imagined as I navigated the expedited course into qualitative research.

I want to express my appreciation to Drs. Cory Struthers and Pete Bettinger for being willing to serve on my committee, providing me with advice and support along this journey. Cory provided thoughtful dialogue, adding valuable commentary and feedback throughout this process that impacted the evolution of this thesis. Her keen insights and questions challenged me to think outside the box. Pete’s contributions to my academic career have been significant. Since 2018, he has mentored me through academic and professional terrains alike, teaching me the importance of preparation and networking in the field of forestry. It is the lessons he has taught me both inside and outside the classroom that will stick with me indefinitely.

I am indebted to many friends and colleagues. Many thanks to Mandy and Taylor who were my biggest supporters everyday and in every way; although, they did not have much choice in the matter since we were assigned a shared office. Even though the pandemic prevented us from

becoming friends sooner, Mandy's friendship could not have come at a more crucial point. She was the sole person who understood my tribulations and shared my same frustrations. Her ability to serve as a counselor and comedian, simultaneously, was unparalleled. My friendship to Taylor can be accredited to Dr. Bettinger, it was a random pairing that led to a fond friendship. On the darkest of days, she was my light and in forestry classes full of males, she was my female outlet. Her genuine nature and witty remarks made this stressful journey all the better. To the many others, that have yet to be named, it is my sincerest hope that you know who you are and understand appreciative for you guiding and cheering me on.

In addition, I would like to thank my family for urging me forward and rejoicing with me in my successes. I would like to thank my mom for encouraging me to "spread my wings and fly" six years ago as she sent me to Georgia. I am appreciative for my dad's support; he was always a call away on the worst days and never failed to catch me at every misstep I had along the way. To the family members I have failed to mention by name in the dwindling remaining space, I'm thankful for their faith and humbled by their support. I am thankful for my most loyal companion, Winchester, for his unwavering presence at my feet as I worked, and his reminders to take breaks. And last, but most importantly, the endless love, support, and patience from my dear fiancé, Wesley. He was my rock through it all, reminding me to turn my eyes to the Lord in moments of apprehension.

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CHAPTER 1

INTRODUCTION AND LITERATURE REVIEW

Purpose of the Study

In August of 2018, the U.S. Forest Service (USFS) published a document entitled *Toward Shared Stewardship: An Outcome-Based Investment Strategy*, outlining a vision for accomplishing land management objectives across boundaries (U.S. Forest Service, 2018). The Strategy was written in response to calls from Congress following the passage of a provision in a 2018 Omnibus Spending Bill, the “fire funding fix,” that addressed the agency’s budget for wildfire management. Through the idea of the Shared Stewardship strategy, USFS leadership expressed its vision for improving forest management and wildfire risk mitigation as an enduring emphasis for the agency. The purpose of the current research is to assess how the Strategy was translated into practice in seven states in the eastern U.S., by analyzing priority goals and investigating institutional changes at the state level to advance relevant goals and priorities.

The Shared Stewardship Strategy addresses agency capacity gaps by encouraging partnerships between the Forest Service and states, tribes, and other non-federal entities to achieve forest management goals across jurisdictional boundaries. In particular, the Strategy outlines increased coordination with states to set priorities and to share accountability for wildfire risk and hazard mitigation across the landscape. Partners are encouraged to collaborate to set priorities by using outcome-based performance metrics and new scientific tools to map priority areas. Using new concepts such as Scenario Investment Planning is encouraged by USFS staff to meet such requirements for working on larger scales (Ager et al., 2019; 2021).

Since the 1990s, national forest policy has emphasized planning and managing across boundaries at the landscape scale (Abrams, 2019; Schultz et al., 2021). Collaborative efforts among

agency, industry, and non-governmental partners to achieve results at larger scales have become increasingly common. This shift in management approach includes concepts such as the ecosystem management embraced by the Forest Service in the 1990s and other policy tools for managing across jurisdictional boundaries (Schultz et al., 2012; Wear et al., 1996). The “all-lands” vision of the Obama Administration also highlighted key aspects of landscape-scale management that are presented in the Shared Stewardship strategy (USFS, 2009). Forest restoration efforts under these approaches typically focus on addressing risks to forest health, mitigating wildfire hazards, restoring wildlife habitat, protecting watersheds, and supporting forest-based social and economic activities.

The Shared Stewardship vision also builds upon previous initiatives and policies, especially in states where there are established partnerships and a history of collaboration. One example is the Collaborative Forest Landscape Restoration Program (CFLRP), which was established to add formality to collaborative efforts by providing funding for landscape-level projects and encouraging collaboration at all stages of planning and implementation (Schultz et al., 2012; Kooistra et al., 2021b). The Joint Chiefs’ Landscape Restoration Partnership (JCLRP) also promoted cross-boundary coordination and project implementation, in this case providing funding to projects that cross the national forest-private land boundary. Similarly, the Good Neighbor Authority (GNA) authorizes state agencies to enter into cooperative agreements to conduct restoration and related work on federal lands (Bertone-Riggs et al., 2018). In addition to these national-level efforts prior to Shared Stewardship, many states had existing infrastructure to support collaborative, cross-boundary forest management activities.

Given the wide diversity across the nation in state-level priorities, capacities, and histories, this research project began with an expectation of variation in the adaptation of the Shared Stewardship initiative across the country. Thus, tracking efforts as states sign memoranda of understanding (MOUs) helped to answer questions about the implementation of Shared

Stewardship. We conducted semi-structured interviews to capture key federal and non-federal partners' initial expectations about Shared Stewardship. The first phase of interviews began in 2019, focusing on early implementation in the western states that signed MOUs (Phase 1, detailed in Kooistra et al., 2021a). The next phase of research, detailed in this paper, began in late 2020, focusing on eastern states with signed MOUs. We conducted research to help determine priority needs, specific goals, and any state-level developments in response to the Strategy that were identified by the actors in these states.

In Chapter 2, interviewee experiences and recommendations from our eastern study states are synthesized into a guide about initial Shared Stewardship efforts. Published as a practitioner paper by the Public Lands Policy Group (PLPG) at Colorado State University, this document is a freely accessible, public-facing resource aimed at USFS managers, non-agency partners, and interested stakeholders. It was written to reflect the current state of implementation of Shared Stewardship in the eastern part of the country. It complements a publication from the first phase of our research, focused on implementation in the western states, by explaining how Shared Stewardship is being operationalized in the eastern states where federal land is less abundant and resource concerns are distinct from those in the West (Kooistra et al., 2021a). It also includes state-specific information in the form of state summaries at the end of the report for each of the states in which we conducted interviews. The series of state summaries examine individual state-specific examples of how Shared Stewardship is being incorporated into existing processes and any changes stemming from signing the MOU. These examples from a diverse set of interviewees are presented as tangible representations of early implementation that can be used by public, private, and NGO partners as Shared Stewardship continues to be applied to management across the East.

This contribution aims to answer questions among USFS staff and partners about the application and opinions of stakeholders regarding the next steps for Shared Stewardship. To that end, it establishes a baseline for how Shared Stewardship and other similar strategies are integrated

into states with existing collaborative processes and where majority of the land is held by private entities. Information collected during this phase of research helps to identify the factors driving state and federal choices about strategic partnerships and directions from local to federal scales across this region and contexts in the United States. We describe the opportunities, challenges, and adjustments at local, state, and federal levels that interviewees felt were needed to successfully accomplish cross-jurisdictional work under the new Strategy. Understanding how different stakeholders and partners define Shared Stewardship as an approach to land management and the tools they use to implement the Strategy will provide insights into how the Strategy aligns with existing tools and initiatives. This practical publication contributes to previous literature on how to enhance strategic partnerships and engagements across diverse contexts and issues.

Chapter 3 expands on chapter 2 and aims to provide a qualitative analysis of how Shared Stewardship is being integrated in the South by focusing on five states within the USFS Southern Region (Region 8): Arkansas, Georgia, Florida, North Carolina, and Texas. In comparison to the western states, less research has been conducted on federal forest policies and partnerships in southern states due to the lack of extensive tracts of federal land. Nonetheless, pests and wildfires still affect these states, and the region is facing threats to forest conservation as a result of forest conversion and urbanization. This region was of particular interest due to the strong presence of the forest industry, the predominance of privately owned land, and a longstanding history of partnerships. As Moseley and Charnley (2014) and Schultz et al. (2012) concluded, a combination of institutional, community, and individual attributes are fundamental to the use of collaboration in USFS initiatives. Thus, this chapter aims to answer the question of how USFS initiatives that encourage partnerships to attain landscape-scale management can be integrated on a landscape with a high percentage of private land and the potential need for industry buy-in.

This analysis can be thought of as a comparison to Kooistra et al. (2021a), which is focused on initial findings from interviews in the western states. It develops context for how differently

Shared Stewardship is being applied to collaborative management processes and how quickly states are implementing activity on the ground. It serves as a baseline for future research on tracking the trajectory of Shared Stewardship implementation and measuring success. In this analysis, we find that the longevity of Shared Stewardship is in question due to the lack of formal mechanisms and funding sources attached to the agreements. The future application of Shared Stewardship in the southern U.S. is demonstrated by the results pertaining to perceived opportunities and challenges. The ideas behind Shared Stewardship are not likely to disappear; however, many predicted the name could change as different initiatives are announced by new administrations.

Structure of the thesis

Chapter 2 is a document designed for public use that seeks to make results about the implementation of Shared Stewardship accessible and attractive to readers who are interested in tracking its development. Chapter 3 of this thesis is written in the style of a manuscript that is intended to be submitted for consideration of publication in the *Journal of Forestry*, an academic journal. It addresses a gap in the literature concerning the operationalization of USFS initiatives, like Shared Stewardship, in the southern U.S. where there are longstanding partnerships and extensive private land ownership. Chapter 4 provides a summary of the results of these efforts and discusses implications for future research on Shared Stewardship.

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CHAPTER 2

EARLY IMPLEMENTATION OF THE U.S. FOREST SERVICE'S SHARED STEWARDSHIP STRATEGY IN THE EASTERN UNITED STATES¹

¹ Kee, D., T. Aldworth, J. Abrams, C. Kooistra, C. Schultz, and H. Huber-Stearns. 2021. Public Lands Policy Group Practitioner Paper no. 12. Colorado State University. <https://sites.warnercnr.colostate.edu/courtneyschultz/shared-stewardship/>. Reprinted here with permission of the publisher.

Executive Summary

Introduction and approach

In 2018, in response to Congress' calls for a renewed approach to forest management, the U.S. Forest Service (USFS) announced the Shared Stewardship Strategy - an initiative aimed at increasing the pace and scale of cross-boundary forest management activities (USFS, 2018). In 2019, our team started conducting independent research through semi-structured interviews on the implementation and development of Shared Stewardship efforts in the western U.S. (Phase 1, detailed in Kooistra et al., 2021b). In late 2020, we began investigating states east of the Rocky Mountains (Phase 2), which we refer to herein for ease as “eastern” or “Phase 2” states, although our study included states as far west as Nebraska. This Executive Summary provides an overview of our key findings across Phase 2 states (also see Table A) and our observations on the future of Shared Stewardship.

Key findings

Priority management needs identified by interviewees across the states we studied in Phase 2 included increasing the pace and scale of management activities, managing invasive species, improving outreach to private landowners, and developing market infrastructure that can help support the unique management needs of each state. Interviewees in all states said they hoped that Shared Stewardship would help address these priorities and build upon past efforts to accomplish more cross-boundary work. Given the large proportion of private forest ownership in these states, interviewees described the need to effectively engage private landowners to meet landscape-scale management objectives. Interviewees also expressed goals representing the specific context of their states.

At the time of our interviews, participants in most states did not yet report significant changes in the prioritization, planning, or implementation processes for land management that could be specifically tied to Shared Stewardship. Commonly, interviewees described well-

established patterns of communicating priorities and plans with other agencies or organizations that they widely considered to be examples of joint prioritization, though the final decision-making authority remained an intra-agency process. Of the states that were adjusting their prioritization processes, changes were minimal, and it was clear they were still in early stages of development. These changes included new tools facilitating data sharing, new positions, and new committees to help jointly prioritize management activities.

Many interviewees saw Shared Stewardship as an opportunity to continue to improve and expand partnerships, share decision-making space, and enhance coordination. Interviewees in most states noted the importance of expanding existing partnerships to reflect the diverse suite of interests under the broader goals of Shared Stewardship. Additionally, interviewees relayed the importance of having state-level positions that could coordinate collaboration and communication among partners. They also felt that it was necessary to create a shared culture of collaboration between the USFS and state agencies to successfully implement the Strategy.

Interviewees emphasized the need for clear direction to ensure the longevity of Shared Stewardship. This included communicating clear expectations about what Shared Stewardship means in practice and how agencies and partners should interact moving forward. Interviewees in many states said that developing and monitoring performance measures should be a collaborative process to clarify expectations and goals among partners.

Comparing findings from Phase 1 (western) and Phase 2 (eastern) states

Interviewees in both phases expressed that collaboration and cross-boundary work are needed, and they believed the Strategy helped formalize and frame existing efforts that set the foundation for Shared Stewardship in each state. There was also a clear need for more leadership direction, increased communication between partners and other stakeholders, specific guidelines and expectations for the implementation of the Strategy moving forward, and increased funding and staff positions to support Shared Stewardship.

Eastern state interviewees primarily discussed already having well-established communication and relationships across agencies and other landowners, as necessitated by the context of more private lands and intermixed land ownership compared to much of the West. As a result, in eastern states, interviewees generally expected prioritization processes to remain internal to individual agencies and organizations, but they described intentions to enhance communication about priorities across agencies. Interviewees in western states anticipated pursuing more fundamental changes to joint prioritization efforts and more interaction between the states, federal government, and other partners throughout planning and implementation processes.

The future of Shared Stewardship

- Participants in both phases of our research identified many consistent themes that are likely to determine the future success of Shared Stewardship across the United States.
- Clear direction and support from leadership in agencies and partner organizations are needed to provide structure and incentives to personnel and stakeholders to effectively pursue Shared Stewardship using existing mechanisms and any new resources available.
- Identifying and supporting key knowledge brokers (e.g., coordinators and liaisons) is necessary to coordinate across agencies, expand partnerships, and align Shared Stewardship efforts across local, state, regional, and national levels.
- Understanding and building on the history of collaboration across a state, including existing programs, plans, and relationships that facilitate cross-boundary coordination and multi-partner collaboration, will be key to supporting the unique development of Shared Stewardship in each state.
- Persistent challenges will affect the success of Shared Stewardship and other initiatives that promote collaborative approaches to increasing the scale of forest management. Perceived challenges include inadequate funding levels, capacity (e.g., a lack of staff and trained personnel), and other resources for planning and doing projects. Staff turnover also

presents challenges to developing and maintaining collaborative structures and relationships.

- There is a substantial need to continue and expand outreach and work with private landowners and other partners or stakeholders to meet landscape-scale objectives.
- Regardless of the longevity of the Shared Stewardship Strategy, there is strong agreement that developing and using effective partnerships across agencies and jurisdictions will continue to be essential regardless of changes in politics and policies.

Table A: Phase 2 Research Summary

State	MOU date	Signatories	Key findings*	Goals
Arkansas	9/4/2019	USDA, Governor of Arkansas, Arkansas State Game and Fish	Shared Stewardship is viewed as a "next step" in better forest management to use resources more efficiently; this formalizes the long history of collaboration for forest management.	Leverage resources to accomplish more work compared to previous efforts through additional partners and aligned objectives.
Florida	08/18/2020	USFS (Regional and statewide), Florida Forest Service, Florida Fish and Wildlife Conservation Commission, NRCS, and USDA Farm Service Agency	Shared Stewardship is still in its early stages, but there has been progress. New efforts build off previous management efforts and projects. There is a new Shared Stewardship position funded by the FL Fish & Wildlife Commission and the USFS.	Increase scale of forest management by including more partners and leveraging resources on projects where objectives align.
Georgia	11/23/2019	USDA, Governor of Georgia	Shared Stewardship is viewed as a formal, new name for the land stewardship work and partnerships that exist in the state already.	Foster communication among partners to identify overlapping objectives in forest plans and areas for increased partnership efforts and resource sharing.
Massachusetts	11/21/2019	USFS, Massachusetts Department of Energy and Environmental Affairs	Shared Stewardship in Massachusetts is centered on Mohawk Trail Woodlands Partnership. The Shared Stewardship MOU did not noticeably alter discussions or practices that were already occurring, according to our interviews.	Increase federal role in western Massachusetts; formalize relationship of USFS to State of Massachusetts.
Nebraska	9/4/2020	USDA, Governor of Nebraska	Shared Stewardship has led to the creation of a steering committee consisting of USFS and Nebraska State Forest Service representatives. Interviewees highlighted how outreach with private landowners will be critically important to accomplishing landscape-scale objectives in the state.	Facilitate cross-boundary prioritization and communication; facilitate capacity building and resource sharing.
North Carolina	9/26/2019	USDA, North Carolina Department of Agriculture and Consumer Services, North Carolina Forest Service, and North Carolina Wildlife Resource Commission	Shared Stewardship represents the next step to address the current management challenges with the increasing threats to forest health in the state.	Increase coordination between agencies and partners when identifying priority needs in the state.
Texas	7/17/2020	USDA, Governor of Texas	Texas Shared Stewardship embodies the collaborative work of the existing Texas Forestry Council. Shared Stewardship is not expected to change any structures or practices across the state because coordination across agencies and partners is engrained in existing approaches.	Foster further collaborative opportunities; showcase the work Texas has been doing for a decade.

Introduction

In 2018, in response to calls from members of Congress for a renewed approach to forest management, the U.S. Forest Service (USFS) announced the Shared Stewardship Strategy (the Strategy) as a means of increasing the pace and scale of cross-boundary forest management activities (USFS, 2018). The Strategy encouraged expanded partnerships with states, tribes, and other federal and non-federal entities to reduce wildfire hazard and enhance forest resilience at landscape scales across jurisdictions. In particular, the Strategy promoted:

1. Working with states to set spatial and management priorities to share in the ownership of risks presented by fire and coordinate planning and action, particularly through state Forest Action Plans (SFAPs).
2. Using a suite of scientific tools to model and map fire risk, largely through Scenario Investment Planning processes (Ager et al. 2019), to identify strategic places to invest in forest management.
3. Utilizing tools such as the Good Neighbor Authority (GNA), stewardship contracts, and categorical exclusions under the National Environmental Policy Act (NEPA) to facilitate and accelerate forest management work; and
4. Pursuing related goals, such as working with stakeholders to develop outcome-based performance indicators, streamline internal agency processes, and expand the use of risk management principles in fire management.

The Strategy was a continuation of previous efforts to expand the scale of planning, coordination, and forest management, and focus investments on locations and at scales large enough to affect ecosystem-level processes (Table 1.1).

Table 1.1: Examples of key policies, strategies, and mechanisms to support collaborative, cross-boundary work prior to Shared Stewardship

Research question	Key findings
State Forest Action Plan (SFAP) requirement in the Farm Bill	The 2008 Farm Bill required states to complete a SFAP to be eligible to receive funding from the State and Private Forestry division of the USFS. The SFAPs are intended to outline forest management priorities and plans across jurisdictions and landscapes.
Collaborative Forest Landscape Restoration Program (CFLRP)	The CFLRP was established in 2009 and provides up to 10 years of funding for collaboratively developed projects on fire-adapted, federally owned landscapes; projects are chosen through a competitive application process (Kooistra et al., 2021a; Schultz et al., 2012, 2018).
Joint Chiefs' Landscape Restoration Partnership (JCLRP)	The JCLRP was established in 2013 and funds work on both private and public lands; it is currently an internal agency initiative but was introduced for authorization through legislation in 2021 (Cyphers and Schultz, 2019).
Good Neighbor Authority (GNA)	The GNA was permanently authorized in 2014 and allows state agencies to enter into cooperative agreements to perform forest management activities on federal lands, thereby increasing the capacity of federal land managers (Bertone-Riggs et al., 2018; Cowan and Bertone-Riggs, 2021).
National Cohesive Wildfire Management Strategy	The National Cohesive Wildfire Management Strategy, which was finalized in 2014, calls for increased communication and coordination across jurisdictional boundaries to address and prepare for the threats posed by wildland fire (WFEC, 2014).

Research Project Overview

In 2019, Colorado State University entered into a challenge cost-share agreement with the USFS State and Private Forestry deputy area to conduct independent research on the implementation and development of Shared Stewardship efforts. The principal investigator for this effort is Dr. Courtney Schultz; Drs. Heidi Huber-Stearns at the University of Oregon and Jesse Abrams at the University of Georgia are co-principal investigators. Our research to date has consisted of three phases. Phase 1 explored initial perspectives on the Strategy across state-level agencies and other key partners in states with Shared Stewardship agreements in the western United States. Phase 2 research (reported upon herein) explored perspectives among similar agencies and interests in states east of the Rocky Mountains with Shared Stewardship agreements. Phase 3 is in progress and involves conducting case studies of projects implemented in the spirit of Shared Stewardship to understand how partnerships are developing on the ground and how different funding sources and mechanisms or policies are being used to do multi-jurisdictional work.

The following research questions guide our project:

1. How is the Strategy playing out in different states, and what factors are driving choices about strategic partnerships and directions?
2. What opportunities and challenges are associated with implementing the Strategy?
3. How is the Strategy leading to changes in prioritization strategies, collaborative efforts and partnerships, cross-boundary planning, and project implementation, compared with business as usual?
4. How are priorities being set under the Strategy? In other words, what approaches, including different authorities, collaborative forums, and scientific tools, are being used?
5. What institutional and organizational changes, including new kinds of capacities, policies, incentives, and measurement approaches, are needed to successfully move forward with principles of Shared Stewardship?
6. What political opportunities and challenges will arise with increased state-level engagement?

Summary of key findings from Phase 1: Interviews in western states in 2020

The first phase of our work took place in 2020 and explored state-level perspectives from key USFS and state leaders and other partners on how Shared Stewardship efforts were developing in western states (Kooistra et al., 2021b). The following key findings from our Phase 1 research in western states provide a useful comparison to our findings from the eastern states (Phase 2) presented later in this report:

Goals for Shared Stewardship

- A key priority was to increase the pace and scale of work on the ground to reduce fire hazard, enhance forest and watershed health, and promote forest ecosystem resilience. Increasing agency capacity, supporting and growing the forest products industry and restoration workforce, and supporting local economies were also main priorities.

- Many interviewees viewed Shared Stewardship as an opportunity to embrace a more collaborative mindset, jointly identify cross-boundary priorities, expand partnerships, leverage capacities, and share risks across state and federal agencies.

Cross-boundary efforts that precede Shared Stewardship

- Shared Stewardship efforts in each state formalized and built upon histories of partnerships, mechanisms and programs (e.g., GNA, CFLRP, JCLRP, and state-level initiatives), forest health assessments, and plans that encouraged collaboration and cross-boundary management.
- Existing state-level funding mechanisms for supporting cross-boundary work were also key in supporting Shared Stewardship efforts.

Progress to date

- Several positions in state and federal agencies were created at the state, regional, and national levels to support Shared Stewardship through enhanced coordination and liaison activities between agencies, partners, and other potential stakeholders.
- A few states also created multi-stakeholder advisory committees or groups to guide Shared Stewardship efforts. Other states relied on existing committees, some with expanded membership to better represent the diversity of partners in the state.
- Most states were still conceptualizing Shared Stewardship at the state level and specific directions, or changes had generally not occurred yet at the field level. Utah was the only state that designated new funding for Shared Stewardship, which was being distributed through an existing program to support cross-boundary forest management projects.

Prioritization processes under Shared Stewardship

- Joint prioritization was viewed as key to enhancing shared decision making between agencies. Many states operationalized this aspect of Shared Stewardship through updating

their State Forest Action Plans with key partners to assess risks and set goals across all jurisdictions statewide.

- Some states used the USFS Scenario Investment Planning approach to assist with prioritization, others used local or state-level processes and datasets to set priorities.
- Interviewees recognized that transparent, science-based, collaborative processes would help ensure that diverse perspectives and different landscapes were considered in future joint prioritization efforts to pursue Shared Stewardship.

Opportunities and challenges

- Interviewees said that strong leadership and clear expectations for agency personnel, field staff, and partner organizations were needed for the development, implementation, and longevity of Shared Stewardship.
- They sought clarification about how to integrate new processes with existing programs and plans, and whether Shared Stewardship will drive funding allocations.
- Interviewees expressed a need for more training on how to use the existing mechanisms and funding options across scales to do cross-boundary work, rather than needing new policies.
- Increased funding and capacity, particularly more positions in coordinating or liaison roles, were seen key to successfully implementing the Strategy.

Approach for Phase 2

For the second phase of our project, we conducted research in states east of the Rocky Mountains similar to our research in the western states in Phase 1 (see Figure 1). The prevalence of private land in these primarily eastern states and the relatively smaller footprint of federal lands create different opportunities and challenges relevant to Shared Stewardship goals compared to in western states. A combination of private forestland ownership and productive growing conditions has tended to allow for the persistence of a timber industry that is well-distributed across most of

our Phase 2 study states, except for Nebraska and Massachusetts. This presence helps provide economic utilization opportunities for timber removed from restoration and other management projects. Intermixed land ownership has also fostered a longstanding emphasis on cross-boundary and cooperative management initiatives in Phase 2 states. On the other hand, this ownership fragmentation can present challenges to landscape-scale coordination of planning and management, and several Phase 2 states have been identified as hotspots of forest parcelization and conversion (Stein et al., 2009).

Throughout 2021, we conducted 64 semi-structured and confidential interviews across seven states that had signed Shared Stewardship MOUs before the end of 2020 (Table 2.1). We interviewed key stakeholders and leaders who worked in these states, including those who work in forest management or policy for federal or state government agencies, in partnership or collaboration with the USFS, represent conservation interests, or work in the forest or wood products industry at a regional or state level (Table 3.1). Five of the states we included are in USFS Region 8, one is in USFS Region 2, and one is in USFS Region 9.

On average, we conducted fewer interviews per state in Phase 2 than we did in Phase 1 because we found that development and implementation of the Strategy had generally progressed further in the western states compared to these states at the time of the respective data collection efforts. This meant that relatively fewer people were involved or could provide a state-level perspective about Shared Stewardship - a fact that resulted in a smaller sample size. Interview questions focused on: how the Strategy was developing; perceived challenges and opportunities; new approaches to prioritization, partnerships, and implementation; and institutions (i.e., processes, forums, positions, capacities, policies, or measurement approaches) that support or complicate Shared Stewardship goals.

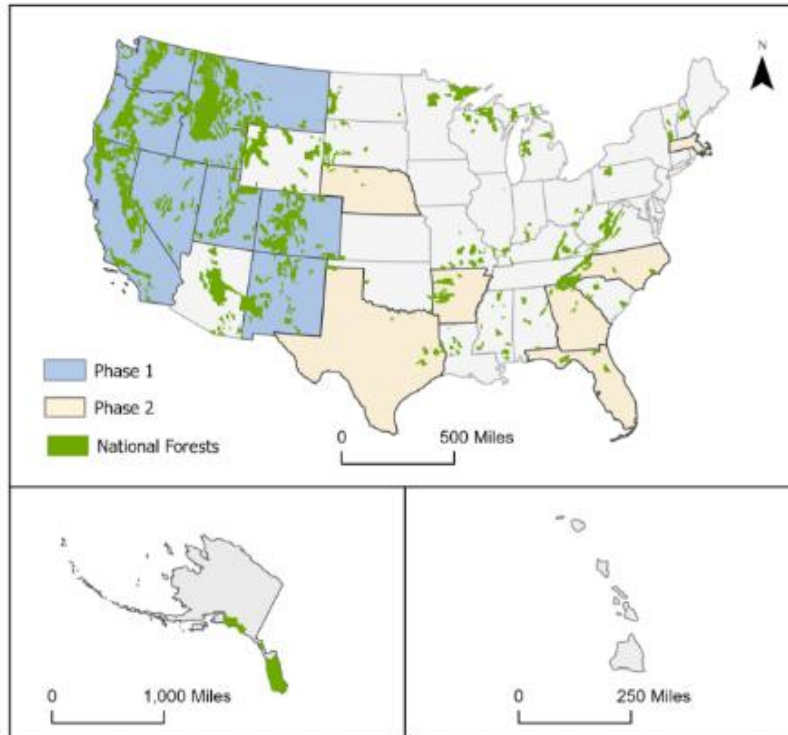


Figure 1: States included in Research Phases 1 and 2 and USFS lands across the U.S.

Table 2.1: Number of interviews, interview dates, and MOU signing date

National or state-level	Number of interviews ^a	Interview dates	MOU signing date
Arkansas	10	October 2020-April 2021	September 4, 2019
Florida	8	June 2021-July 2021	August 18, 2020
Georgia	10	June 2021-July 2021	November 23, 2019
Massachusetts	10	November 2020-March 2021	November 21, 2019
Nebraska	7	March- May 2021	September 4, 2020
North Carolina	10	April-June 2021	September 25, 2019
Texas	9	February-April 2021	July 16, 2020
TOTAL	64		

*We did not investigate Shared Stewardship in Ohio, which had an MOU by the end of 2020, to avoid overlap with efforts by other researchers.

Table 3.1: Number of interviewees by category

Category of interviewees	Number of interviews	Number of interviewees^a
Federal agencies	20	22
State agencies	20	20
NGOs, collaborative groups, other partners not associated with the forest products industry ^b	19	19
Partners associated with the forest products industry ^c	5	6
TOTAL	64	67

^a Some interviews were conducted with multiple interviewees present.

^b We did not interview anyone about perspectives from a specific Tribe, Pueblo, or Nation, although we and many interviewees acknowledge their crucial roles in stewardship of land. No Tribe was a signatory to an MOU for this stage of our research, and none of our referrals were to Tribal representatives.

^c Forest products industry partners included non-agency individuals in the forest, timber, or wood products industry, as well as representatives of the industry who serve on state or national councils, associations, or advisory groups. Interviewees from NGOs or collaborative groups who focused primarily on forest products were placed in the forest products industry partner category.

Part 1 Findings: Main Themes Across States

Here, we present overall findings synthesized from all 64 interviews in the seven states we studied in Phase 2. State-specific examples are included to help demonstrate the range of themes we identified; however, these examples are not exhaustive. More details on individual states can be found in Part 2 of this report beginning on page 36.

Goals for Shared Stewardship

Interviewees identified the primary challenges to forest management as the loss and fragmentation of forestland resulting from urban development, changes to forest composition due to invasive species, and the effects to forest health from a changing climate, worsening fire seasons,

and forest pests and diseases. Interviewees highlighted a general need to increase forest management activities to address these challenges. They also described a need to develop a more robust market infrastructure for the timber industry, stressing that greater industrial capacity could assist land managers with restoration objectives.

Interviewees across all states agreed that there was a need to expand outreach to private forest landowners to meet landscape-level objectives and ensure a consistent supply of wood products. The diversity in private landowners' management objectives presented a challenge for effective coordination and implementation of landscape-scale management activities. As a result, interviewees acknowledged the need to perform substantial outreach to plan, coordinate, and achieve objectives at meaningful spatial extents.

There was some variability in participants' perspectives on priority needs in different states. For instance, Massachusetts interviewees focused more on the need for community and economic stability around forest ecosystems given the lower priority of hazardous fuel and wildfire risk reduction compared to other states. Nebraska interviewees did not discuss challenges related to land conversion and urban growth. Interviewees in Nebraska and Massachusetts expressed a need to build timber and forest product markets, in contrast to southeastern states where there are established markets but a need for stronger alignment between supply and demand.

Interviewees consistently said that Shared Stewardship would largely serve to formalize and expand cross-boundary efforts that predated Shared Stewardship, including increased coordination with private landowners. They described how established partnerships or relationships among agencies, NGOs, and other stakeholders were already being used to share capacity across boundaries. For example, interviewees in Texas described the common practice of sharing burn crews for prescribed fire operations on state and federal land. Many interviewees also hoped that Shared Stewardship would increase the amount of cross-boundary management and collaboration

in places where it might not exist, particularly by more outreach and engagement with private landowners.

Interviewees believed Shared Stewardship would provide a greater impetus to work with partners to leverage capacity to achieve land management objectives. Most interviewees agreed that there was a lack of sufficient capacity within the USFS, and to a lesser extent in state agencies, to plan, coordinate, fund, and implement management activities. They hoped these capacity challenges could be overcome or minimized through enhanced coordination.

Interviewees in Massachusetts described an additional set of goals for the Strategy that reflected the state's unique context. Because the USFS manages no land within the state, and because Shared Stewardship in Massachusetts focuses exclusively on the Mohawk Trail Woodlands Partnership (MTWP) – an emerging collaborative governance effort – rather than statewide management concerns, interviewees oriented their responses toward this existing partnership. Interviewees said their goals for the MTWP, and thus for Shared Stewardship, included passing federal legislation designating a special management zone for the USFS in the area that would allow it to act as a formal stakeholder in MTWP discussions. Most Massachusetts interviewees said they hoped that Shared Stewardship and greater USFS involvement would eventually result in a small research forest and tourism center in western Massachusetts that could host experiments with localized silvicultural treatments and serve as a venue to communicate general forest management principles to the public.

Cross-boundary efforts that precede Shared Stewardship

Interviewees described how established partnerships or relationships between federal, state, and local agencies and NGOs were being used to share capacity across boundaries. Current coordination efforts and collaborative partnerships at the state level provided a foundation for Shared Stewardship. For instance:

- The Longleaf Alliance is an effort spanning across the Southeast with the purpose of coordinating a partnership among private landowners, forest industry, state and federal agencies, and conservation organizations interested in managing and restoring longleaf pine forests for their ecological and economic benefits.
- The Western North Carolina All Lands Strategy is an initiative collaboratively developed by the All Lands Working Group that is composed of local, state, and federal government agencies, conservation interests, and local stakeholders to coordinate priorities and actions across all lands in Western North Carolina.
- The Texas Forestry Council provides a platform for public agencies to address forest management issues and communicate goals and objectives among agencies.

“[Agencies] have different objectives, but we all come together through these councils and committees and talk about what we're doing, talk about how each different organization might be able to help the other meeting their program objectives.” (Texas)

Key partners and stakeholders have historically worked together to ensure that federal and state resources are being focused on landscapes with the greatest opportunity to achieve shared management priorities through collaborative management plans. For instance, in states located in USFS Region 8, existing agency staff positions, strategic plans, and various multi-partner groups or committees have been in place for years to support coordination across agencies and jurisdictions, and interviewees expected these roles to continue under the formal umbrella of Shared Stewardship. Region 8 interviewees also discussed integrating future restoration strategies under Shared Stewardship with elements of the National Cohesive Strategy for Wildland Fire Management Southeast Regional Action Plan, State Forest and Wildlife Action Plans, the Keeping Forests in Forests Partnership, and National Forest Land Management Plans to leverage resources

for collective landscape-level impact. Many of the key partners for these initiatives and plans are the same partners involved with discussions about progressing Shared Stewardship.

“The partners that we have within our Shared Stewardship agreement are partners that are key to assisting landowners, of any type, with management practices and focusing on the critical needs that are determined by our state. And some of those critical needs have been determined through our State Forest Action Plan, the State Wildlife Action Plans and other plans that we look to for direction going forward.” (Florida)

In Massachusetts and Nebraska, interviewees described the history of cross-boundary management between federal and state agencies as being less extensive. However, in Massachusetts interviewees also hoped that Shared Stewardship would support existing efforts with the Mohawk Trail Woodlands Partnership. In Nebraska, interviewees explained that cross-boundary efforts started after the 2006 Spotted Tail and 2012 West Ash Fires, describing how the Pine Ridge Landscape Restoration Project brought together many partners to work across boundaries to address undesirable conditions and reduce the threat of future wildfires.

Interviewees described the use of existing federal authorities and programs (e.g., GNA, stewardship agreements, JCLRP, CFLRP) as being important for accomplishing their Shared Stewardship goals. These mechanisms continue to facilitate communication among agencies and partners and enhance their ability to leverage resources to accomplish work at larger scales. The Forest Stewardship Program and Forest Legacy Program remain central to the cross-boundary efforts outlined in all the eastern states’ Forest Action Plans. State forestry agencies use these programs to facilitate stewardship by working across landscapes and land ownerships to address key resource issues.

“Before Shared Stewardship, there was the Good Neighbor [agreement], and there have been a number of projects in North Carolina tied to the Good Neighbor Authority. There's opportunity under Shared Stewardship, but there were also some things that were already in the works under the Good Neighbor Authority.” (North Carolina)

Progress to date

In general, interviewees did not yet report significant changes to prioritization, planning, or implementation processes for land management tied to Shared Stewardship in their states. Across many of the states, several interviewees said, “we’ve been doing Shared Stewardship for years.” They did not expect to see specific changes result from the Strategy because they believed they already practiced its main approaches. Interviewees in other states who did perceive Shared Stewardship to include new processes pointed to an absence of leadership direction, a lack of Shared Stewardship-specific funding opportunities, staff turnover, or the COVID-19 pandemic as factors influencing the slow rate of progress.

“The next logical step was to go and sign on with the U.S. Forest Service...There's a lot of overlap and duplication, and anything that we can do to avoid duplication and overlap is a good thing. Since we've signed it, there's not really anything that's different than the way that we're doing any of these things...It just seemed like a better way to collaborate.”
(Florida)

Of the states that were adjusting processes, changes were still in the early stages of development:

- Massachusetts interviewees said that the Strategy had helped convince members of the State Legislature to pass a bill recognizing the MTWP footprint as a specially designated conservation area.

- Florida interviewees pointed to a new Shared Stewardship position funded by the state that would work with the USFS on the Osceola National Forest to coordinate management activities.
- Nebraska interviewees discussed the new joint USFS and Nebraska State Forest Service Shared Stewardship steering committee working to prioritize cross-boundary strategies and management actions across the state.

“We're kind of at the stage where we're trying to bring the experts together and have these conversations, broader conversations about priorities. I know what our priorities are in the state. We have a 200-page forest action plan that does a pretty good job, I think, of outlining what those priorities are. So, how do we then blend together the different groups to meet those priorities within our state?” (Nebraska)

Prioritization processes under Shared Stewardship

Many interviewees said they believed they had been practicing joint prioritization for years through longstanding practices of interagency and partner communication. Most commonly, these practices occurred after state agencies produced their statewide plans such as State Forest Action Plans, State Wildlife Plans, and State Conservation Action Plans, although interviewees said that agencies often shared plans before they were finalized to solicit input from their partners. An example of this was the Texas Forestry Council, a group of land management agencies that has met quarterly for the past decade to discuss planned management actions and share capacity where feasible. State agencies and partners are not expecting a change to prioritization and anticipate using existing channels to continue to accomplish work on priority areas.

In Massachusetts, interviewees gave the example of the MTWP, which utilized a voluntary, consensus process to make decisions that predated Shared Stewardship and involved

representatives from communities within the partnership’s footprint, agencies, collaboratives, and NGOs to prioritize activities. In Nebraska, interviewees discussed the new steering committee created in response to Shared Stewardship made up of USFS and Nebraska State Forest service personnel as a new attempt at joint prioritization. Interviewees said this committee’s goal was to outline priority needs for the state and develop plans to meet those needs. At the time of our interviews, the committee had determined primary action areas but had not yet determined the next steps.

“It was through the advisory committee and the advisory committee then morphed into the partnership board...[but] the communities are free to do whatever they want. Now they're not bound by any of that...hopefully they will align with the goals of the partnership, but...they're not beholden to do anything.” (Massachusetts)

In some states, new open-access tools are coming online that could allow agencies and partners to better share information to inform prioritization. In both North Carolina and Georgia, some interviewees pointed to the North Carolina Data Basin project as a mapping tool that could allow actors in agencies and partner organizations to better determine priority areas through shared data. Interviewees in North Carolina described how the “All Lands” project in the western portion of the state had already successfully made use of this tool. At the time of our interviews, the tool had not yet been rolled out in Georgia, but interviewees in the state said they were optimistic about its potential and highlighted it as a working example of potential future data sharing among federal and state partners under Shared Stewardship.

Opportunities and challenges

Many interviewees saw Shared Stewardship as an opportunity to improve partnerships between agencies and private landowners to include more perspectives in the decision-making

space and work at larger scales across jurisdictional boundaries. Although interviewees in Massachusetts focused more on opportunities to enhance partnerships between the USFS and non-federal entities, interviewees in the other states emphasized opportunities to work more with private landowners to achieve landscape-level objectives. Interviewees also saw potential to leverage resources more efficiently to increase the pace and scale of forest management and increase economic activity to support the timber and forest products industry.

“Like it, or not, the world runs on relationships and Shared Stewardship is a little more formal way to build relationships and trust. The only way you can build relationships and trust is to do stuff together, do projects together. And that's the important piece... And that's the beauty of the Shared Stewardship agreement. It gives us a vehicle to do stuff together.”
(Arkansas)

Shared Stewardship was also believed by interviewees to be a means to better align federal and state objectives to achieve goals that have been challenging in the past, such as working together to focus on complementary priorities. Many interviewees said that it was necessary to create a shared culture of collaboration between the USFS and state agencies. Interviewees from Region 8 felt that, although federal and state agencies have a history of working together, there are still areas where agencies work primarily independently.

“There's this intent to make sure that the Forest Service tries to get work done on their property, while we are trying to get the work done on state land holdings. Each agency has a different--they operate differently. So, it's kind of like mixing oil and water. And sometimes that doesn't mix... I think some of it's just from years of having operated that

way, kind of more of a vacuum that it's a little harder to mingle a little bit and work together on certain things.” (North Carolina)

Interviewees overwhelmingly said that they needed clear direction from agency leaders and partners about their expectations for Shared Stewardship to ensure its longevity. They had various ideas about the intent of the Strategy and many expressed confusion as to the intent; it was often unclear to them how the Strategy might impact state and federal agencies. State-level interviewees wanted to know if higher-level goals would impact their existing programs and resources and desired more guidance about what activities are considered to fall under “Shared Stewardship.”

Many interviewees in state agencies and NGOs expressed concern with the Strategy due to past experiences where collaborative agreements with USFS have not delivered the results they expected to see when they signed agreements. Many interviewees felt hesitant to increase work with USFS beyond the current levels of collaboration due to the “red tape” involved with working on federal land. Some state-level interviewees, particularly in Region 8, felt they were not truly trusted as a partner by USFS because they were only allowed to assist on federal land but not to take an equal or lead role in management activities. They noted that efforts to engage the USFS as a partner were met with mixed reactions; some thought the USFS should allow them to have more of a say and really embrace the opportunity to work with partners to conduct more work on federal land.

Interviewees said it was important to have more funding for implementing Shared Stewardship, more state-level positions dedicated to advancing collaboration and communication among partners, and collaboratively developed performance measures to track and support the long-term success of Shared Stewardship. Interviewees in USFS regions with existing regional Shared Stewardship Coordinators described their instrumental role in developing the MOU and

setting up any new steering committees (e.g., in Nebraska). Many felt that progress could be advanced and sustained with the help of a new state-level coordinator for each state and at the USFS regional offices. Regularly communicating progress with the public and other stakeholders to highlight economic success and ecological outcomes was seen as essential for maintaining public support and engagement from diverse partners.

Outstanding questions and uncertainties

Some interviewees wondered about the implementation and longevity of Shared Stewardship, particularly how it would be integrated with other existing initiatives and programs and whether Shared Stewardship as a strategy would result in substantive changes. Some interviewees were concerned that this was an agreement with no action behind it, or that this initiative could disappear, at least in name, if direction for implementation were not provided soon. Some of the lack of action was felt by interviewees to be due to the lack of initiative from USFS leadership, at all levels, to begin steps towards implementation. Although it was unclear how state and federal administration changes would affect Shared Stewardship, most interviewees felt optimistic that the basic framework would remain.

“I hope it will elevate the priority...That's where you need to move beyond just the gentleman's agreement if we're going to work together towards this thing. We need an actual roadmap.” (Georgia)

Most interviewees did not generally perceive Shared Stewardship as an attempt to shift management responsibility for federal lands to the states. In most cases they did not see any indications that Shared Stewardship would cause major shifts in power dynamics. However, in Massachusetts, interviewees said that entering a formal partnership with USFS for the MTWP would be an increase in federal involvement.

Lastly, we consistently heard that COVID-19 slowed the progress of Shared Stewardship. Agency and partner organizations shifted their resources and priorities to address the pandemic. Many planned in-person meetings or forums were postponed or canceled and many planning processes, including updating the SFAPs, were delayed. Interviewees also mentioned changes in budgets for management activities, especially for NGOs that depend on fundraising arising from in-person interaction.

Discussion and Recommendations

Our research aimed to characterize expectations for Shared Stewardship efforts and how these efforts were developing in states east of the Rocky Mountains (Phase 2 of our research project). In this section, we first present Table 4.1 to summarize our Phase 2 research findings related to each research question. Then we compare key findings across research Phases 1 and 2. Lastly, we discuss key factors that emerged from our interviews and from relevant literature that are most likely to affect the success of future Shared Stewardship efforts.

Table 4.1: Number of interviewees by category

Research question	Key findings
<p>How is the Strategy playing out in different states, and what factors are driving choices about strategic partnerships and directions?</p>	<ul style="list-style-type: none"> • Shared Stewardship will play out differently in each state due to differing priorities and unique existing structures and relationships. • Leadership is important in each state to move forward with implementation. • Interviewees said that new inter-organizational partnerships as well as relationships with private landowners would allow them to identify shared priorities, better leverage resources, and coordinate management actions at a larger scale.
<p>What opportunities and challenges are associated with the Strategy's implementation?</p>	<ul style="list-style-type: none"> • Interviewees thought that Shared Stewardship added formality to existing collaboration between agencies and partners to address priority needs of forest management. • There is a need for consistent leadership and clear communication about Shared Stewardship expectations (e.g., if there will be new resources or directives to do Shared Stewardship). • There were noted shortages in capacity (e.g., staff) and resources (e.g., funding, equipment) to accomplish more cross-boundary work. • Interviewees questioned the longevity of Shared Stewardship, and most interviewees were not sure that the Strategy would lead to significant changes.
<p>How is the Strategy leading to changes in prioritization strategies, collaborative efforts and partnerships, cross-boundary planning, and project implementation, compared with business as usual?</p>	<ul style="list-style-type: none"> • Prioritization processes were generally expected to remain internal to individual agencies. However, interviewees expected continued and increased communication and coordination among agencies and other partners to identify overlapping priorities and opportunities for joint efforts. • Interviewees hoped Shared Stewardship would provide a way to fill existing capacity gaps through enhanced coordination, sharing and leveraging resources, and perhaps additional staff positions.
<p>How are priorities being set under the Strategy? What approaches, including different authorities, collaborative forums, and scientific tools, are being used?</p>	<ul style="list-style-type: none"> • Priorities are informed by agency plans (e.g., State Forest/Wildlife/Conservation Action Plans) with increased attention on future opportunities and intentions to identify overlapping priorities across plans and agencies to better align efforts and leverage resources in the future. • Interviewees used existing datasets and scientific tools to help inform Shared Stewardship planning. Interviewees in Region 8 discussed the use of the North Carolina Data Basin, a tool with some similarities to the USFS Scenario Investment Planning tool. • Interviewees planned to use existing authorities, policies, and mechanisms to accomplish their work.
<p>What institutional and organizational changes, including new kinds of capacities, policies, incentives, and measurement approaches, are needed to successfully move forward with principles of Shared Stewardship?</p>	<ul style="list-style-type: none"> • Interviewees said they needed clear communication about expectations for Shared Stewardship and support from leadership to pursue any new developments, approaches, or projects under Shared Stewardship. • Existing regional positions in the USFS were important for getting MOUs signed but new state-level Shared Stewardship positions were thought to be increasingly important for advancing Shared Stewardship. • There is a perceived need for more funding and staff to support Shared Stewardship efforts, as well as a need to incentivize field-level managers to implement changes if extensive alterations to current practices are desired.
<p>What political opportunities and challenges will arise with increased state-level engagement?</p>	<ul style="list-style-type: none"> • Most interviewees did not expect Shared Stewardship to bring any significant shift in power dynamics for decision-making. • They anticipated that the principles of Shared Stewardship (e.g., jointly identifying shared priorities and coordinating efforts) would continue to be operationalized through existing collaborative efforts and forums and that existing roles would be formalized by the Strategy.

There were some key similarities in our findings across all states in the first two phases of our research:

- In general, there was a recognized need for more active forest management to enhance forest and watershed health through mitigating wildfire hazard, managing invasive species, and restoring more resilient ecological conditions.
- There was a consensus that some individual agencies lacked the funding and agency capacity to accomplish large-scale forest management without leveraging resources through partnerships.
- People welcomed the formality and framework that Shared Stewardship provided. Shared Stewardship was seen as a continuation of existing collaborative, cross-boundary work and coordination but also as an effort that increased formality and attention to partnerships.
- Strong leadership and clear communication within agencies and across partners will be essential for effective coordination and to create similar expectations about roles, timelines, and other efforts to pursue Shared Stewardship.
- The main differences in findings across the two phases of our research reflected different contexts, histories, and available tools and resources for doing Shared Stewardship:
- The prevalence of federal and other public lands in the West, compared to more private lands in the East, has led to unique approaches and histories that affect how interviewees expected Shared Stewardship to develop.
- Interviewees in western (Phase 1) states felt that there was a need for Shared Stewardship to promote a more collaborative mindset, risk sharing, and joint prioritization to identify shared goals and leverage resources to do more cross-boundary work.
- Interviewees in the eastern (Phase 2) states highlighted a long history of partnerships focused on achieving goals across multiple ownerships. They used examples of non-federal

programs and initiatives, especially those that engaged private landowners, to illustrate why they expected minimal changes resulting from Shared Stewardship.

- Phase 1 interviewees expressed an opportunity to increase transparency, coordination, and cross-boundary work by jointly setting priorities through new, collaborative processes that considered needs and goals across landscapes and jurisdictions. Many western states approached joint prioritization in the 2020 SFAP revision process.
- Phase 2 interviewees felt that existing approaches to prioritization were effective and mostly included communicating with other partners after engaging in internal agency prioritization and planning processes.
- Phase 1 interviewees showed interest in having more guidance and training from agency leadership on how to collaborate effectively, whereas Phase 2 interviewees mainly expressed that they were already equipped for collaboration and did not need additional guidance for prioritization.

Factors affecting future success

Many factors affect the success of agency initiatives like Shared Stewardship, and collaborative, cross-boundary land management efforts in general. Here, we focus our discussion on recommendations and insights about supporting Shared Stewardship efforts based on findings from our research in Phase 2 states. This discussion generally applies to the findings from our Phase 1 research as well (see Kooistra et al., 2021b).

People consistently discussed the importance of leadership in multiple agencies and spoke highly of instances where central knowledge brokers (e.g., coordinators and liaisons) worked to bring separate organizations together. Creating and utilizing these positions would likely increase the amount of cross-boundary collaboration and hasten the development and implementation of both prioritization plans and management activities that transcends property lines.

Past collaborative history is an important factor influencing the Strategy's form in different locations and will shape how the Strategy develops in the future. Understanding past collaborative efforts and existing foundations will help land managers and high-level decision makers better understand the form and capacity of Shared Stewardship efforts in specific contexts.

Interagency and partner relationships are important, particularly in light of turnover and its impacts on collaboration. Minimizing the effects of staff turnover in agencies and other partner organizations is key to increasing the pace at which cross-boundary proposals develop, as it reduces the amount of time needed to build and maintain relationships between relevant actors compared to situations where turnover is high.

People repeatedly identified insufficient staff capacity of the USFS as a barrier to increasing the pace and scale of management. While Shared Stewardship undoubtedly works to address these types of capacity gaps through leveraging the power of partnerships, it is worth noting that the Strategy alone is not enough to overcome the general capacity shortage these gaps expose. Increasing the capacity of the USFS in areas like grants and agreements staff may be necessary to successfully implement the Strategy.

Land managers recognized a substantial need for outreach to private landowners to meet landscape-level objectives. Interviewees in all states highlighted the need for continued education and outreach to landowners about land management techniques and opportunities. Land managers consistently noted the limits of managing only public lands in both Phase 1 and Phase 2 states. Phase 2 interviewees discussed the need for work with private landowners relatively more, although engaging more with private landowners was also a common goal for future Shared Stewardship efforts in Phase 1 states as well.

Many interviewees raised doubts about the longevity of the Shared Stewardship initiative. However, they agreed that building effective partnerships across agencies and ownership boundaries would continue to be essential in the coming years, regardless of changes in politics

and policies. Nearly all interviewees recognized that pressing concerns cannot be addressed by any one agency or landowner working in isolation, and that achieving landscape-level conservation will require fundamental shifts in relationships and operating procedures, as well as support from federal- and state-level policies and continued investments in science, planning, and implementation capacity.

Part 2 Findings: State-Level Summaries

In this section, we present summaries of our findings from our state-level interviews. Summarizing the information in this way allowed us to clearly identify prominent themes for each state and to track how they played out across states. A few considerations are important to note. First, the summaries reflect a snapshot of perspectives about Shared Stewardship at a particular time. Each state was at a different stage in Shared Stewardship efforts when we conducted interviews, and each state has since moved forward in different ways. Second, these summaries are an overview of high-level findings and do not reflect every detail or perspective that we heard. Interviewees were given the opportunity to review their respective state-level summaries to ensure that we captured the main themes from their perspective during our data collection timeframe for that state and they could provide key updates that we added to these summaries. Third, we interviewed an average of 9 people in each state about Shared Stewardship. While those individuals were intended to represent the key actors, organizations, and interests involved with Shared Stewardship, we recognize that other perspectives or nuances may not have emerged in our interviews.

The national forest footprint we identify at the top of each state summary includes all National Forest System lands in that state (national forests and grasslands). Footprint data are from the Congressional Research Service. The number of national forests in each state is from the National Forest Foundation and includes administratively combined units.

Arkansas

Shared Stewardship agreement: MOU signed 9/4/19 by the U.S. Department of Agriculture, the Governor of Arkansas, and the Arkansas Fish and Game Commission	Interviewees: 10 people between October 2020 and April 2021	National forest footprint: ~3 million acres across two forests in Region 8
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History and context

Interviewees described priority needs across the state involving: increasing the pace and scale of active forest management, continued support of the forestry industry, and outreach to private landowners. There is a continued need statewide for thinning, prescribed burning, and invasive species control. Many Arkansas forests are overstocked, and some interviewees reported that the state currently has more trees per acre than any time in its history. They stressed that thinning is important to prevent a future forest health crisis such as an outbreak of southern pine beetles or red oak borers. Interviewees from state agencies said that there is more timber being produced than can be taken by mills. Interviewees representing state agencies noted the need to increase capacity within state forestry agencies to support the forest products industry and maintain local timber economies. Interviewees also said that it was important to expand beyond forest management goals and address the risk of land conversion to non-forest uses. Interviewees identified the need for managers to engage private landowners in order to achieve landscape-level objectives.

The majority of the state’s land coverage is forested, with hardwood stand types making up the majority of forests and followed, closely, by plantation pine stands. About one-fourth of Arkansas’ forest acreage is owned by corporate owners. The largest proportion of forested land is owned by individual families. Arkansas contains the largest National Forest area in the South with 2.5 million acres within the Ozark-St Francis and Ouachita National Forests.

The presence of large private land holdings and the longstanding culture of collaboration are important contexts in Arkansas for Shared Stewardship, which builds upon existing efforts under the Good Neighbor Authority, Collaborative Forest Landscape Restoration Program, and the Joint Chiefs' Landscape Restoration Partnership. Most interviewees believed that Shared Stewardship will not fundamentally change forest management efforts because of the existing culture of working together on projects at a landscape scale. Interviewees said that the unique state history with collaborative forest management practices, government structure, and strong partnerships set the stage for this effort. Interviewees also mentioned that NRCS houses two Arkansas Forestry Commission positions, and the mix of employers has made past collaboration successful in the state.

Progress since agreement signing

Interviewees believed that Shared Stewardship adds formality to the efforts that were already taking place but that it has not significantly changed forest management in Arkansas. They described it as a way to formally define how partners are going to work together, improve existing relationships, and effectively respond to increasing ecological challenges in Arkansas. There are currently no formal projects underway that are labeled as "Shared Stewardship." Interviewees highlighted existing state plans, like the State Forest Action Plan, as being key guides to continued prioritization but state agencies and partners are not expecting a change to prioritization. They anticipated using existing efforts with planning processes to continue to accomplish work on priority areas.

Primary opportunities and challenges

Most felt Shared Stewardship simply formalized successful cross-boundary practices already in operation, while increasing the possibility for future cross-boundary opportunities. Interviewees hoped that Shared Stewardship would formally encourage partners to share resources and find other ways to work together efficiently to ease the challenges that all entities face regarding

budgets, capacity, and resources. Many interviewees saw Shared Stewardship as providing opportunities for increased timber harvest, which they said would generate funding for other restoration work and support for market infrastructure.

Many interviewees mentioned the partner-centric principle of Shared Stewardship being greatly affected by the pandemic. Discussions about the implementation of Shared Stewardship had to be put on hold as state priorities shifted to pandemic relief rather than new land management opportunities. Interviewees said that many NGOs saw decreases in their available funding resulting from a lack of annual fundraising opportunities.

Interviewees stressed the need for flexibility in their approach to Shared Stewardship but said that clearer communication, support for risk taking, and strong leadership across the USFS, state agencies, and partner organizations all are needed to align expectations and enable new approaches. Some interviewees expressed concerns about federal initiatives becoming too bureaucratic and undermining the current relationship-based approach, explaining that their concerns stemmed from previous collaborative efforts that were hindered because of communication barriers between agency leadership and the staff implementing work on the ground. They felt people and policies needed to stay in place long enough to facilitate long-term relationships and support landscape-level projects. There was no mention of needs for more direction, policies, or tools to support Shared Stewardship. Instead, people identified the need for more long-term planning and coordination around utilizing existing mechanisms.

Research takeaways

Forest managers in Arkansas face growing challenges with forest land conversion, timber markets, and the need to increase active management. Shared Stewardship is still in its infancy in Arkansas. There are not yet examples of projects that can be tied directly to Shared Stewardship, but there is an existing culture of collaboration and a history of projects under past collaborative

initiatives. Progress has been made with building the infrastructure for integrating the ideas behind Shared Stewardship into landscape-level management documents like the State Forest Action Plan.

“This Shared Stewardship agreement here kind of almost seemed redundant because the agencies and NGOs and all the interested parties already worked very well together to do this and had been [doing so] for quite a while. So, it just seemed like it was a signing ceremony just to kind of put it on paper and make it official.”

Florida

<p>Shared Stewardship agreement: MOU signed 8/18/20 by USFS (Region 8 and National Forests in Florida), Natural Resources Conservation Service, U.S. Department of Agriculture Farm Service Agency, Florida Forest Service, and Florida Fish and Wildlife Conservation Commission</p>	<p>Interviewees: 8 people between June and July 2021</p>	<p>National forest footprint: ~1.2 million acres across three forests in Region 8</p>
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History and context

Interviewees said the priority needs across the state are to: increase active forest management, control invasive species, restore longleaf pine, and increase private landowner outreach. Increasing the scale and pace of active forest management is important to decrease the likelihood of forest heath crises. Interviewees noted that public perception and population growth are challenging their ability to use prescribed fire, which many described as the best management tool they have. To address these challenges, interviewees noted the need to increase communication with partners and landowners to coordinate management activities on a landscape scale. Additionally, interviewees expressed concern about rapid population growth that is leading to forest

conversion to urbanized uses. Consequences identified by interviewees included a decline in forest product markets and an increase in land value for other uses.

Forests cover about half of Florida's land area, there are more than 17 million acres of forests, and the majority are managed for timber production. Florida has more pine plantations as a percentage of forestland base than any other southern state. The majority of the forested land is owned by private landowners and the small remaining percentage of forestland is held by federal and state agencies. The National Forests in Florida include the Apalachicola, Osceola, and Ocala National Forests which collectively span more than 1.2 million acres in north and central Florida. The USFS in Florida also manages the 1,400-mile Florida National Scenic Trail, which is one of 11 national scenic trails in the United States.

Interviewees reported that the state's Shared Stewardship agreement builds upon ongoing landscape-level initiatives like the Ocala to Osceola Wildlife Corridor project, a conservation initiative in North Central Florida that received funding from the National Resources Conservation Service. Related to this project is the Ocala to Osceola (O2O) Partnership, which is a regional partnership of public agencies and private organizations working together toward the common goal of land conservation that will create a 1.6 million acre stretch of land connecting the Ocala and Osceola National Forests. There are also existing multi-partner efforts through the Longleaf Alliance, a Landscape Conservation Cooperative, and the Florida National Scenic Trail partnership.

Progress since agreement signing

Interviewees believed that Shared Stewardship adds formality to efforts that were already underway in the state. Shared Stewardship was characterized by interviewees as the next logical step for landscape-level management in the state; they said that it outlines how partners will work together to more efficiently utilize their respective skill sets and resources. Interviewees viewed Shared Stewardship as an umbrella that covers all of the work they have been doing and provides a framework to increase the success of future efforts.

Shared Stewardship in Florida is just beginning to be formally implemented. Interviewees described recent progress as a new Shared Stewardship position, continued conversations between partners, and the development of new tools for prioritization. The new Shared Stewardship position will be housed on the Osceola National Forest and will be a Florida Wildlife Commission position jointly funded with the USFS. Interviewees said that the signatories to the MOU continue to meet regularly, although not necessarily under the banner of Shared Stewardship. Interviewees spoke about new tools designed to aid in prioritization and data sharing amongst agencies and partners; they did not identify these tools specifically as elements of Shared Stewardship.

Primary opportunities and challenges

Interviewees hoped that Shared Stewardship would formally encourage partners to share resources and find other ways to work together efficiently to ease the capacity gaps and challenges that they all face. Interviewees felt there was opportunity to build more partnerships to restore more of the landscape. They also thought that engaging the forest industry in initiatives like Shared Stewardship could help to ameliorate pressures related to population growth, including forest conversion and market sustainability.

Interviewees said that the biggest challenge is not having clear direction on what Shared Stewardship means and how they will implement projects, as there have been no formal meetings between partners to specifically discuss the initiative. They said administration and leadership changes present challenges for implementation and longevity. Also, public perception and highly fragmented private land ownership are two challenges interviewees said are key hurdles to landscape-level management. Finally, many interviewees mentioned the partner-centric principle of Shared Stewardship being greatly affected by the COVID-19 pandemic. Signatories signed the MOU virtually, and the inability to meet in person has affected subsequent implementation, according to interviewees.

Interviewees perceived that federal agency internal barriers made working with state agencies and other partners more difficult. Often interviewees referenced how federal policy and processes slow down the pace of accomplishing work. Interviewees did not feel optimistic that this would change and suggested that communication would be key to working around those barriers to accomplish more on the landscape. Interviewees identified the need for a specific position or committee focused on planning and managing efforts at the state level. They also pointed to the need for consistency in communication and the need to develop metrics for measuring the success of Shared Stewardship.

Research takeaways

Florida managers face growing challenges with population growth leading to urbanization, the ability to engage in active management for issues like wildfire, and the maintenance of timber markets. Both public and private forestlands play a critical role in supporting Florida's forest products industry, and supporting this industry is an important priority for state agencies. The implementation of Shared Stewardship is still in its infancy in Florida, and there are few examples of projects being done specifically under the formal title of "Shared Stewardship." However, there is an existing culture of successful collaborative relationships and projects completed under past collaborative initiatives. Progress has included building prioritization infrastructure for integrating the Strategy into existing cross-party documents and a new Shared Stewardship position housed on the Osceola National Forest. Interviewees felt that the next step for implementation would be conducting formal meetings for partners to discuss Shared Stewardship. Interviewees believed that it would be helpful to have a state-level coordinator to facilitate these meetings and to help move implementation forward in the state.

"I think right now, we're just waiting to try to figure out again, what do those [Shared Stewardship goals] mean...trying to distill that down into what does that means at a state

level, what does it mean at a regional level...how we actually implement that move it forward when some of these national messages are written quite broadly.”

Georgia

<p>Shared Stewardship agreement: MOU signed 11/23/2019 by the U.S. Department of Agriculture and the Governor of Georgia</p>	<p>Interviewees: 10 people between June and July 2021</p>	<p>National forest footprint: ~750,000 acres across one forest in Region 8</p>
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History and context

Interviewees expressed that priority management needs in Georgia are centered around: more active forest management at the landscape level and reaching out to private landowners. There was an emphasis on increasing activities like prescribed burning and thinning to address forest health concerns associated with overstocked forests that, in the past, have led to outbreaks of southern pine beetles and Ips beetles. There are also management needs related to improving forest composition in the northern part of the state, where fire has been excluded and thus invasive vegetation has spread across the landscape. Some people also mentioned a lack of road infrastructure prohibiting some management activity in northern Georgia. Interviewees stressed the importance of communication with private landowners about management practices, especially given the large percentage of land in private holdings adjacent to public state and federal lands. Forest conversion was another concern among interviewees. Some said that the urbanization of Georgia forests could lead to declines in forest ecosystem services. Interviewees identified stronger timber markets as one way to slow the rate of forestland conversion to non-forest uses.

Forests account for two-thirds of the state's total land area. Interviewees described the forestry industry in Georgia as an economic backbone of the state. Georgia claims status as the

number one forestry state in the nation based on metrics like the amount of privately owned timberland and annual harvest volume. Georgia has more forests privately owned than any other state in the nation, while state and federal agencies account for a very small percentage of ownership. Georgia's single national forest, the Chattahoochee-Oconee National Forest, covers 749,689 acres in north Georgia and contains six ranger districts.

Georgia has a longstanding history of landscape-level partnerships and initiatives that set the tone for the implementation of Shared Stewardship. Examples include the Greater Okefenokee Association of Landowners, the Sentinel Landscape Partnership, the Altamaha River Initiative, the Gopher Tortoise Conservation Initiative, and participation in longleaf pine restoration under America's Longleaf Restoration Initiative and the Longleaf Alliance. In addition, the Foothills Landscape project stretches across 157,625 acres of the Chattahoochee National Forest and is designed to maintain and improve watershed and ecological conditions.

Progress since agreement signing

Interviewees believe the Shared Stewardship agreement adds formality to existing efforts and provides opportunities to increase the pace and scale of future projects by leveraging partners' capacity. Shared Stewardship in Georgia builds on previous federal policies and programs like the Good Neighbor Authority and Joint Chiefs' Landscape Restoration Partnership projects. Interviewees felt that past initiatives and existing projects fall under the umbrella of Shared Stewardship and represent ongoing efforts towards the goals outlined in the MOU. The Foothills Project was highlighted by interviewees as a current landscape-level effort that aligns with the vision of Shared Stewardship. With this project, the USFS is seeking to create, restore and maintain ecosystems that are more resilient to natural disturbances. The North Carolina Data Basin, built by a team of scientists at the Conservation Biology Institute to provide an open-access tool for sharing biological, spatial, and socio-economic datasets, was identified as a tool that could help to advance shared prioritization and decision-making. Though this tool is still in preliminary stages of use and

has not been rolled out in Georgia, interviewees said it was a possible opportunity for future data sharing under Shared Stewardship by both federal and state partners.

Primary opportunities and challenges

Interviewees hoped that Shared Stewardship would encourage more partnerships and incentivize partners to share resources to increase the scale of management across the landscape. They identified private landowner-oriented NGOs like the National Wild Turkey Federation and Quail Forever as critical partners, citing an increased need for NGO liaisons to work with private landowners. Although there are no federally recognized Tribal reservations in Georgia, interviewees still recognized the need and opportunity to include Tribal partners in land management plans; however, interviewees had no formal examples for how this would be done. Shared Stewardship was also seen by interviewees as an opportunity to leverage existing capacities and authorities to help partners focus on overlapping priorities. Interviewees also spoke about existing working relationships across state borders for restoring longleaf pine ecosystems in the region.

Interviewees spoke about key challenges, including the lack of clear direction from state and federal agencies for implementing the Strategy. Some interviewees felt that the Shared Stewardship MOU was an agreement with no action behind it and expressed concern that the initiative would disappear, at least in name, if direction for implementation were not provided soon. Interviewees said leadership and staff turnover after signing the agreement were factors inhibiting the implementation of work on the ground. They felt that to move forward with Shared Stewardship there was a need for a new state-level Shared Stewardship coordinator to promote and guide action in Georgia. Interviewees also thought that it was important to keep agency leaders engaged with implementing Shared Stewardship by continuing to promote state-level efforts. Finally, interviewees said identifying metrics and indicators to measure the outcomes of Shared Stewardship was an important component for long-term sustainability of joint efforts.

Research takeaways

Forest health in Georgia is influenced by the effects of urbanization, the economic drivers of forest management, and the capacity to plan and implement forest stewardship activities. Like many states in the region, Georgia has a long history of collaboration and partnerships among agencies and across boundaries to address these issues. Shared Stewardship efforts have done little to date to fundamentally change existing efforts. Implementing new actions under the banner of Shared Stewardship would require a combination of stronger leadership, dedicated staff, and increased resources. Interviewees said that, while the primary objectives of the Strategy were already in place within the state, there is a need to add formality to current efforts and to increase landscape-level management. There are notable partnership efforts and ongoing projects that can be considered under the umbrella of Shared Stewardship; however, these longstanding efforts also come with the challenge of managers possibly not being open to change from the way things have always been done. Interviewees said the next steps for Georgia will be discussing how to have people in place to promote Shared Stewardship conversations and implementation for the long term.

“We've had this scattered shotgun approach in the past, where it's almost as if we're having these random acts of conservation across the landscape. And so having a greater awareness...will help us to better leverage the resources that we have.”

Massachusetts

Shared Stewardship agreement: MOU signed 11/21/2019 by the U.S. Forest Service and the Massachusetts Office of Energy and Environmental Affairs	Interviewees: 10 people between November 2020 and March 2021	National forest footprint: 0 acres in Region 9. The Mohawk Trail Woodland Partnership area covers ~ 360,000 acres.
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History and context

Interviewees identified three priority needs for forest management in Massachusetts: land conservation, economic sustainability, and a revitalization of the forest products and recreation/tourism industries. Other concerns included managing changes in forest composition resulting from climate change, though this was mentioned less frequently.

The USFS manages no land in Massachusetts, but there is public land owned and managed by the State of Massachusetts and local governments, though it is thoroughly intermixed with private property. Because of this land ownership context in Massachusetts, Shared Stewardship is centered on the Mohawk Trail Woodlands Partnership (MTWP) located in the hardwood forests of the northwest corner of the state.

The MTWP aims to promote conservation and economic sustainability across 21 towns in Franklin and Berkshire counties of western Massachusetts. It began in 2012, when the U.S. Department of Housing and Urban Development brought into a joint planning effort the Berkshire Regional Planning Commission, the Franklin Regional Council of Governments, the Franklin Land Trust, and the Massachusetts Office of Energy and Environmental Affairs. This effort eventually resulted in the MWTP, with a Board of Directors made up of members from the local communities. Throughout this process, the USFS acted as a non-voting consultant in determining priorities or actions of the MWTP.

Progress since agreement signing

Many interviewees perceived the signing as a positive public relations effort in a rural region historically distrustful of the federal government. Some interviewees, however, said that the signing of the agreement had little effect on collaborative efforts already occurring in Massachusetts. All interviewees said the USFS was playing a supportive role in the MWTP by acting as an informal consultant and providing advice on forest management when requested. All non-USFS interviewees believed the MTWP landscape would benefit from increased USFS involvement in the region, which they said may require federal legislation that allows USFS employees to increase their level of participation. All USFS interviewees declined to comment on this subject.

At the time of our interviews, decisions made by the MWTP were finalized with consent from all the townships that are signatories to the MTWP agreement. One interviewee described this as a “consensus process”. The Franklin and Berkshire regional planning committees each have regional plans for their counties, and interviewees said that these will likely form an initial foundation to begin jointly prioritizing project areas, administrative objectives such as targeted grant proposals, and next steps at a more localized scale. Since the Shared Stewardship agreement was signed, USFS State and Private Forestry has awarded the MTWP multiple grants that were key to developing a forest climate resiliency program and a riparian tree planting program. These grants have been used to leverage over \$150,000 in state funds for the MWTP.

Primary opportunities and challenges

Interviewees identified three primary opportunities or effects of Shared Stewardship: increasing funding availability, increasing technical support from the USFS, and creating a forest education and research center. Interviewees believed that more USFS involvement could result in grants and funding directed to the region. They also thought that more USFS involvement could result in the sharing of technical forestry expertise that could increase the pace and scale of

conservation work, though many interviewees were unclear about what specifically they hoped the USFS would bring to the table. Interviewees envisioned the opportunity for the potential development of a forest education and research center along with a demonstration and research forest to help garner support from those skeptical of federal involvement with their local lands. Some interviewees also mentioned a desire to increase the involvement of the Northern Research Station (NRS). They spoke positively of NRS's past interactions with the MTWP and also highlighted the value of the participation of the USFS State and Private Forestry deputy area.

Many interviewees perceived the primary challenges facing Shared Stewardship in Massachusetts to be distrust among local residents toward the federal government, the declining forest products industry, the COVID-19 pandemic, and difficulties securing long-term funding. Despite some initial distrust, however, interviewees said that the relationship between the USFS and local communities had dramatically improved. Environmentally focused activists opposed aspects of the initial MTWP plan, and interviewees also anticipated further challenges on that front.

Interviewees noted the difficulty in creating a sustainable forest economy, as the existing infrastructure for such an industry is in sharp decline in the state. Some interviewees spoke about the need to create markets to handle the type of low-value material that would likely come out of the landscape covered by the MTWP. Finally, interviewees generally discussed the need for long-term funding commitments, which they said would improve the ability to plan and implement more management activities.

Research takeaways

Shared Stewardship in Massachusetts is less USFS centered than in other states due to the absence of National Forest System land in the state. This was broadly - but not universally - seen as a barrier to increased USFS involvement. Most interviewees said they did not believe the Shared Stewardship MOU signed in 2018 would impact the MTWP beyond providing an opportunity for positive public relations for increased federal involvement in forest management in the area, though

some interviewees did express optimism for an increase in technical assistance and funding from the USFS. The State Forest Action Plan for Massachusetts was not the centerpiece of collaboration for Shared Stewardship efforts. Rather, the MTWP agreement and framework were of central importance. Currently, the planning and prioritization process for Shared Stewardship operates through the MTWP’s model of collective decision making. Interviewees supported state and federal leadership thus far and hoped that the initial interactions with the USFS were a preview to a fruitful relationship ahead. Interviewees perceived that federal legislative changes could allow a more active role for the USFS in Massachusetts and help provide additional funding and support to the Partnership.

“The signing of the Shared Stewardship plan was a really good one. I think it got some positive [public relations] for that area of the state. But I think the foundation has been there before the Shared Stewardship program was even signed off on.”

Nebraska

<p>Shared Stewardship agreement: MOU signed 09/04/2020 by the U.S. Department of Agriculture and the Governor of Nebraska</p>	<p>Interviewees: 7 people between March and May 2021</p>	<p>National forest footprint: ~257,000 acres across two forests (managed by one forest supervisor) in Region 2</p>
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History and context

Interviewees identified numerous priority needs for improving the management of Nebraska forests including: addressing eastern red cedar encroachment, improving and continuing public outreach, mitigating the risks and negative outcomes of high-severity wildland fires in the

Panhandle region through thinning and prescribed fire, managing the spread of noxious weeds, and creating and sustaining timber harvesting and forest products industries. Importantly, priority management needs described by interviewees varied by location within the state due to vastly different ecological and jurisdictional contexts.

The western portions of the Nebraska National Forest and Grasslands have intermixed land ownership characteristics and contain naturally occurring ponderosa pine forests along the Pine Ridge escarpment. The eastern portions of the Nebraska National Forests and Grasslands, by contrast, are separate, but contiguous, blocks of land without private inholdings. These eastern Nebraska lands contain hand-planted ponderosa pine and eastern red cedar forests that were converted from grasslands in the early 20th century by foresters. Because of this land-use history, these lands are ecologically distinct compared to adjacent land ownerships, the vast majority of which retain grassland characteristics. National Forest land managers in western Nebraska are more concerned with wildland fire, while those in eastern Nebraska are focused on invasive species encroachment.

Following catastrophic fires in 2006 and 2012 that damaged the majority of ponderosa pine populations on the Pine Ridge, the USFS began working with Nebraska Game and Parks to perform fuel treatments aimed at protecting remaining ponderosa stands near the Highway 385 corridor with assistance from the Nebraska Department of Transportation. Interviewees said this sustained collaborative effort and partnership is a recent innovation in Nebraska, where the USFS traditionally operated independently unless wildfire suppression incidents necessitated resource sharing.

Progress since agreement signing

Formal Shared Stewardship is early in its development in Nebraska. After the agreement was signed between the USDA and the state, the USFS and Nebraska Forest Service (state) formed a joint steering committee to determine initial priorities. These two agencies split the members of

their committee into four sub-committees that focus on wildland fire, forest health and resilience, forest product utilization and market development, and grant opportunities.

Interviewees familiar with Shared Stewardship thought the goal was to leverage resources and capacity to work across boundaries. Other interviewees, including people from the USFS, NRCS, a local government agency, and an NGO, said they were not familiar enough with Shared Stewardship to know what its goals might be. Currently, the USFS and the Nebraska State Forest Service are the only two partners engaged in Shared Stewardship discussions, and it is unclear if more partners will eventually join these efforts. Interviewees expressed optimism that the process would develop more rapidly after initial relationships were cemented.

Primary opportunities and challenges

Interviewees said that Shared Stewardship might generally provide the opportunity to increase cooperation between the USFS and the state, which would allow increased resource and capacity sharing. Interviewees also said they hoped increased federal-state communication would lead to more grant opportunities for private landowners to perform work on their own properties. Because Nebraska is 97% privately owned, interviewees acknowledged that landscape objectives were unachievable without private landowners also working toward shared goals. Interviewees who discussed the NRCS believed there was an opportunity to expand usage of the Environmental Quality Incentives Program to reach more private landowners. This approach, they said, would build upon past and current Joint Chiefs' Landscape Restoration Partnership projects. From 2017-2019, these projects directed nearly \$1,000,000 to private landowners to complete vegetation treatments on their property through contracts written by Nebraska State Forest Service staff members.

Interviewees said they believed that the Shared Stewardship steering committee would help the state and USFS align management priorities, and some believed their newly revised State Forest Action Plan (SFAP) could serve as a roadmap for these discussions. Importantly, the SFAP process

began months before Shared Stewardship discussions in Nebraska. While the Nebraska Forest Service used USFS datasets to inform the SFAP, the USFS was not directly involved with the SFAP revision. Interviewees said they viewed the SFAP revision as an internal process to the Nebraska Forest Service.

The final opportunity that interviewees identified was the potential for accessing federal datasets and research capabilities to inform management needs across the state. No interviewee pointed to the same dataset or specific research capability, however, and examples ranged from herbicide impact data to fuel modeling.

Interviewees said that a lack of staff capacity and lack of funding are the two primary barriers to implementing the Shared Stewardship Strategy in Nebraska. Specifically, interviewees discussed a shortage of staff in grants and agreements positions within the USFS. Interviewees did not consistently identify specific funding gaps, though they did routinely mention that the USFS in Nebraska was underfunded.

Research takeaways

In early 2021, the development of a Shared Stewardship effort in Nebraska was in its early phases. A Shared Stewardship committee was formed between the USFS and the Nebraska State Forest Service and was still in the process of developing specific landscape priorities. Many interviewees were not familiar with the goals of Shared Stewardship. As in many other states, interviewees perceived USFS and state agency capacity as a limiting factor that they hoped Shared Stewardship efforts would address.

“I think it's so far in its infancy that they're still looking to identify the shared priorities and goals and those types of things. I would hope this time next year, that a lot of the things will not only be solidified, but even built upon.”

North Carolina

Shared Stewardship agreement: MOU signed 09/25/19 by U.S. Department of Agriculture, North Carolina Department of Agriculture and Consumer Services, North Carolina Forest Service, and North Carolina Wildlife Resource Commission	Interviewees: 10 people between April and June 2021	National forest footprint: ~1.25 million acres across four forests in Region 8
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History and context

Interviewees said priority needs in North Carolina included: various aspects of restoring forest ecological health and communication with private landowners. In particular, oaks and other mast-bearing trees in the western part of the state have declined precipitously due to the absence of fire. Management actions recommended by interviewees included thinning and reintroducing fire. Interviewees also noted a need to increase the scale of work, manage cross-boundary issues such as invasive species, especially feral hogs, and improve the health of watersheds. Some interviewees also identified population growth and subsequent land development pressure in the state as other key issues, noting the need for private landowner outreach.

Forested land accounts for the majority of land coverage in North Carolina, with oak-hickory being the dominant forest type, closely followed by planted pine. Private landowners account for most of the timberland, while state and federal land ownership accounts for the remaining small percentage. There are four National Forests in North Carolina that account for 1.25 million acres of public land: the Nantahala, Pisgah, Uwharrie, and Croatan National Forests.

A history of collaborative efforts provides an important policy backdrop in the state. There is currently an “All Lands” project underway in western North Carolina. This All Lands Strategy was collaboratively developed by local, state and federal government agencies, conservation

interests and local stakeholders to prioritize, coordinate and better deliver conservation services across all lands in Western North Carolina. State agencies are providing staff members to help collect inventory data for national forests in western North Carolina, help with hurricane debris removal on the coast, and do work related to prescribed burning in the Piedmont under the Good Neighbor Authority. Examples of other collaborative efforts include the North Carolina Longleaf Coalition, which formed in 2010 to address priority areas for longleaf pine restoration in the state. The Coalition brings together state agencies, NRCS, NGOs, private landowners, and academics, and coordinates with other state efforts like the North Carolina Sandhills Conservation Partnership and the Greater Uwharrie Partnership.

Progress since agreement signing

Shared Stewardship in North Carolina builds upon existing collaborative efforts. Interviewees referenced several Good Neighbor Authority projects that provided a platform for Shared Stewardship. Since the signing of the MOU, state and federal agency signatories have been involved in conversations to identify priority areas where their interests overlap. Interviewees said Shared Stewardship has given partners a vehicle for improving cross-boundary approaches, providing managers with more thoughtful ways of working together to establish rankings for priority projects. They felt that Shared Stewardship has created a way to bring missing partners, like industry and Tribal partners, into conversations for future cross-boundary management projects.

Interviewees described the State Forest Action Plan and the State Wildlife Action Plan as important prioritization tools for cross-boundary work for the state agencies, noting that these were crafted with input from federal partners as needed. The North Carolina Data Basin is an open-access tool for sharing datasets to inform prioritization for forest management plans. This tool currently contains information for different regions in North Carolina through member-uploaded spatial datasets, internet-based maps, and group discussion forums for specific topics. The “All

Lands” project in western North Carolina has made use of this tool, and interviewees described the tool as an example of how data sharing could occur. Interviewees did not seem to think that Shared Stewardship would drastically change prioritization, given the existing suite of tools and partners.

Primary opportunities and challenges

Interviewees expected Shared Stewardship to formally encourage partners to share resources, find ways to effectively work together, and ease the pressures they face regarding capacity to meet management objectives. They saw opportunities to strengthen existing relationships and even include new partners to leverage resources in future projects. Interviewees identified the opportunity to measure success with Shared Stewardship through a tiered approach outlined in the new Nantahala-Pisgah Forest Plan revision, which delineates different levels of what can be accomplished with the help of partners versus when the USFS acts alone.

Interviewees mentioned the need for more direction to guide Shared Stewardship beyond the MOU, which they described as a starting point for implementation. They stressed the need to address challenges associated with USFS staff and funding capacity. They also recommended clear communication, support for management activities, and strong leadership direction from agencies and partner organizations to help align expectations and enable new approaches. Interviewees said that leadership turnover is a challenge for completing projects, noting that it obstructs progress with inter-agency relationships.

Research takeaways

Shared Stewardship implementation is still in its infancy, and there are no new projects associated with it yet. However, interviewees thought that there is an existing culture of successful collaborative relationships and projects completed under past collaborative initiatives that were emblematic of the intent of Shared Stewardship. The future of forests in North Carolina will be affected by population growth and increased urbanization. This is anticipated to result in future conversion of forests and put pressure on other forest resources. Also, people said more active

management is needed to address issues like wildfire and invasive species that have the potential to lead to both ecological and economic impacts. Interviewees felt Shared Stewardship in North Carolina provided an opportunity and mechanism for partners to join together to address these impending threats to the state’s forests. However, there is a need to increase conversation among partners about Shared Stewardship in the state to move towards actual implementation.

“One of the next steps that we have been talking about is really digging in now. We have a State Forest Action Plan, we have a State Wildlife Action Plan, we’re working on finalizing our forest plans for the Nantahala Pisgah [National Forests]. We can utilize those things in order to really hone in on some of these kind of shared priority landscapes that we all want to work on together, around some of these key issues.”

Texas

<p>Shared Stewardship agreement: MOU signed 7/16/20 by the U.S. Department of Agriculture and the Governor of Texas</p>	<p>Interviewees: 9 people between January and April 2021</p>	<p>National forest footprint: ~637,000 acres across four forests (managed by one forest supervisor) in Region 8</p>
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History and context

Interviewees identified two forest management priorities in Texas: restoring historic forest conditions through mechanical treatments and prescribed fire and increasing the amount of public outreach to communicate forest health objectives and treatments. Interviewees said forested lands in Texas are overstocked compared to historical conditions; this has led to an increase in insect and

disease outbreaks and greater wildfire risk. Interviewees also discussed the need to reach out, communicate, and work directly with landowners if they wish to achieve landscape-level objectives.

Interviewees oriented their responses to the humid forests located in east Texas characterized by intermixed ownership patterns with high proportions of private property and dispersed sections of public land. Interviewees noted that in addition to influencing how they discussed Shared Stewardship in Texas, these ownership patterns also framed past efforts to work across boundaries in the state.

The Texas Forestry Council is at the center of cross-boundary forest management in Texas. Formed in 2009, the Council established a platform for public agencies to address forest management issues and communicate goals and objectives among agencies, all of which manage intermixed landownerships. The Council assembles quarterly, giving agency leaders the opportunity to discuss priorities and upcoming management activities with one another. If an agency's management activities align with the priorities of other agencies in the Council multiple agencies will sometimes share capacity. Interviewees said this shared capacity was most commonly in the form of ground-level implementation staff for the execution of fuels or prescribed burn projects. Because of these Council activities, many interviewees believed that a well-developed approach that meets the intent of Shared Stewardship has been present in Texas for some time. Non-governmental partners and private landowners are not typically included in these discussions or meetings among the Council.

Progress since agreement signing

Interviewees were clear that the signing of the Shared Stewardship agreement has not significantly changed forest management in the state. Rather, it cements the work of the Council by formally committing the USFS and state agencies to the communication and coordination framework that the Council has engaged in for the last decade. Most interviewees believed that the

Shared Stewardship agreement would not fundamentally change forest management efforts in Texas because it does not add any new responsibilities or prioritization processes.

Interviewees said that the Council does not use a formal joint prioritization process to plan and prepare formal documents. For example, The Texas State Forest Action Plan and Texas State Conservation Action Plan are written by the Texas A&M Forest Service (state forest agency) and Texas Parks and Wildlife Department, respectively, without significant contributions from other agencies. Despite this, most, although not all, interviewees said that priorities tend to be well aligned among the different agencies. Interviewees said they did not expect this to change because of Shared Stewardship.

One interviewee mentioned that, in retrospect, the Good Neighbor Authority has been more important than Shared Stewardship for changing federal agency practices because it has allowed them to leverage capacity across jurisdictional boundaries. Interviewees thought that more collaboration might result from Shared Stewardship, but they did not anticipate specific new prioritization efforts, capacity sharing, partnerships, or performance measures emerging due to Shared Stewardship.

Primary opportunities and challenges

Interviewees generally thought that Shared Stewardship might provide the opportunity to continue building partnerships that further the goals of the Council. Some interviewees spoke about involving Tribes in future discussions. Interviewees also said the model of the Council could be shared with other states without as much collaborative history to provide a roadmap for success.

Some interviewees expressed the need for additional capacity to adequately achieve management objectives at a landscape scale. They discussed the need for more field-level personnel to execute management activities and more funding to continue and expand the scale of operations. There were opposing viewpoints on the efficacy of stewardship contracts to implement forest management activities on federal lands. USFS personnel spoke highly of the mechanism, saying it

allowed them to better implement restoration activities and provided work for local contractors. Industry-oriented interviewees were critical of stewardship contracting because they believed it reduced revenue to local communities, bypassing the traditional timber receipt funding structure many counties relied on to fund schools.

Interviewees generally described the challenges of maintaining interagency and partner relationships. Interviewees said that the constant turnover within agencies complicates multi-year partnerships and management plans. They said that when agency employees leave their positions, the process of building a working relationship begins anew. Interviewees believed intentional interaction is necessary to maintain a positive, collaborative approach moving forward, and most were optimistic that despite challenges presented by turnover, this would continue.

Finally, interviewees in NGOs described how the COVID-19 pandemic reduced their staff capacity due to budget shortfalls. Because of reduced income, NGOs in Texas lost substantial numbers of employees to layoffs. This had a cascading impact on government agencies; interviewees mentioned that NGOs partner with the USFS and perform management activities on federal land. Interviewees believed the reduced capacity is a temporary problem, and that eventually staffing will return to pre-pandemic levels.

Research takeaways

Interviewees viewed Shared Stewardship as a continuation of the work of the Texas Forestry Council. In this well-established system, prioritization is an independent process done by each agency, including for the Texas A&M Forest Service's State Forest Action Plan and the Texas Parks and Wildlife Department's Conservation Action Plan. There is, however, communication that takes place among agencies informing this prioritization during Texas Forestry Council meetings. The Texas Forestry Council provides a venue to discuss what is occurring on each agency's landholdings and supports capacity sharing as necessary. Shared Stewardship in Texas is

largely viewed as an opportunity to continue fostering relationships across jurisdictional boundaries, rather than a paradigm shift that will affect prioritization processes.

“Because of the [Texas Forestry] Council, [the Texas A&M Forest Service] already had a very strong relationship with the [U.S.] Forest Service. Shared Stewardship in and of itself for Texas has not added a ton. We were already pretty much there. The agreement itself just reinforced what we were already doing.”

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CHAPTER 3
IMPLEMENTING THE U.S. FOREST SERVICE'S SHARED STEWARDSHIP STRATEGY
IN THE SOUTHERN UNITED STATES²

² Kee, D., J. Abrams, T. Aldworth, C. Kooistra, C. Schultz, and H. Huber-Stearns. To be submitted to *Journal of Forestry*

Abstract

The U.S. Forest Service's Shared Stewardship Strategy emphasizes partnerships with states, tribes, and collaborative partners to identify priority areas for management and increase coordination across jurisdictional boundaries. The Forest Service and states are in the early stages of translating the strategy into action, building upon existing state and regional efforts and partnerships. The aim of this research is to identify the factors driving state and federal choices about strategic partnerships and to determine the capacities, challenges, and adjustments needed for accomplishing cross-jurisdictional work in the eastern United States. Here we synthesize preliminary findings from a research project investigating the implementation of Shared Stewardship in Arkansas, Georgia, Florida, North Carolina, and Texas as part of a larger nationwide study on Shared Stewardship implementation. We draw upon semi-structured interviews conducted with key federal, state, and non-governmental partners to illuminate early understandings, strategies, and policy tools for increased state-level engagement in cross-boundary forest management. Our preliminary analysis includes an assessment of the opportunities and challenges associated with the Shared Stewardship strategy and an analysis of the processes adopted by key stakeholders in these Region 8 states. We found that actors have utilized existing programs and partnerships to set the groundwork for Shared Stewardship. Identified changes were relatively modest and mainly centered around enhancing coordination and inclusive representation; however, a few states did report some substantive changes. Overall, interviewees desired clearer communication and direction from leadership about the next steps for implementation.

Introduction

Forest owners and managers nationwide are facing complex challenges that include uncharacteristic wildfire and insect outbreak events, invasive species, drought, and the loss of important habitats (Wear & Greis, 2012). Ownership boundaries dividing state, private, and federal forests are defined legally; however, for forest pests, diseases, and wildfire those boundaries do not

exist. Pests and unwanted fire move easily between forest types, to and from different ownerships, up and down watersheds. At the same time, the social and economic context has grown increasingly complex as a growing population demands ecosystem services from an increasingly stressed and fragmented land base (Wear and Greis, 2012). The cross-boundary nature of contemporary resource management dilemmas has led to varied efforts to plan and manage across jurisdictional and property boundaries. Some of these models have shown promise, though few have demonstrated lasting impacts across landscapes (Schultz et al., 2018).

In response to requests from Congress for a renewed vision for improving forest management for fire hazard reduction and forest resilience, the USDA Forest Service (USFS) released the Shared Stewardship Strategy in 2018 (USDA Forest Service, 2018). Building upon previous policies and initiatives, the Strategy was rolled out with the intent to encourage the federal government to work closely with states and other key partners to set landscape-scale priorities and implement forest treatments to address issues of mutual importance. The USFS is still in the process of working with states to translate these objectives into actions. Since the launch of the Shared Stewardship strategy, 28 states have signed agreements with the federal government identifying their commitments and priorities to managing across traditional jurisdictional and ownership boundaries. We researched how the Strategy was being translated into practice in five states in the southern U.S., looking at priority goals and investigating institutional changes at the state level to advance shared objectives, while examining realized opportunities and existing challenges. Our purpose is to provide an early assessment of this policy tool to inform the ongoing exploration of options for improved collaborative cross-boundary management in the Southern region.

Background & Literature Review

Scholars have recently pointed to a problematic “scale mismatch” between large-scale, dynamic, ecological processes and the scales at which individual land management agencies have the capacity to work (Schultz et al., 2018). Environmental governance scholars emphasize the need

to work across jurisdictional boundaries to better align management activities with ecological processes (Cash et al., 2006; Cumming et al., 2015; Folke et al., 2007). Policymakers and stakeholders are posed with the question of how policy can be designed to incorporate ecological processes and promote collective action and coordination across jurisdictions (Abrams et al., 2017; DeCaro et al., 2017). For challenges like fire management that require action across jurisdictional boundaries, there is a growing effort to create positions, organizations, or other forums that bridge the gap between different actors and governance levels to facilitate coordination (Schultz et al., 2019). Partnerships and collaborative efforts among agencies, private actors, and non-governmental organizations have become increasingly common in many landscapes to achieve outcomes at a significant scale. Due to this shift in approach to management, a new form of governance emerged known as collaborative governance and replaced administrative methods for policy making and implementation (Ansell & Gash, 2008). This type of governance brings public and private stakeholders together in collective forums with public agencies to engage in shared decision making.

Though recent initiatives and policies are described as collaborative through application to collaborative governance or coordinated through partnership-based approaches, it is important to address the discrepancy in the definition of those terms among scholars (Amsler, 2016; Rosenbloom, 2013). Scholars have emphasized that current dialogue on management, politics, and law has not adequately addressed the difference between collaboration versus coordination or cooperation (Amsler, 2016). Thomson and Perry (2006) define collaboration as a process with five components: governance, administration, organizational autonomy, mutuality, and norms of trust and reciprocity, citing Ostrom's (1990) work on the application collective action in managing common resources. Generally, collaborative efforts have been defined in terms of an emphasis on building relationships, common understandings, and joint decision-making processes as a form of conflict resolution in contested environments (Gray, 1989; Margerum 2011). By contrast,

cooperation and coordination generally refer to utilizing existing forms of inter-organizational relationships or partnerships to increase efficiency and impact (Brown, 1980; Petheram, 2004). In response to recent demands shifting towards addressing resource issues across broader social and ecological landscapes, stakeholders have utilized both collaborative and coordinated approaches to natural resource management (Ansell & Gash, 2008). This shift has manifested through the institutionalization of collaborative and partnership-oriented governance models in USFS management activities since the early 2000s (Abrams, 2019).

The USFS and other federal agencies have piloted a series of new initiatives in recent decades to accelerate collaborative and cross-boundary restoration. An example is the Collaborative Forest Landscape Restoration Program (CFLRP), which launched in 2010 to provide more legal formality to collaborative national forest management efforts. The program provides funding to landscape-level projects during all stages of project planning and implementation (Schultz et al., 2012). The Joint Chiefs' Landscape Restoration Partnership began in 2014 and supports forest restoration activities across the public-private divide in landscapes where national forestlands abut or intermix with private lands (Cyphers & Schultz, 2019). Other efforts have also promoted cross-boundary coordination and project implementation, including the Good Neighbor Authority (GNA), sanctioned nationwide in 2014. GNA is designed to improve federal-state coordination by allowing state forest managers to manage federal forestlands (Bertone-Riggs et al., 2018). Under the authority, states can enter into agreements with the USFS to conduct restoration projects and timber sales on federal lands. In doing so, states may be able to retain timber sale revenues from projects or other proceeds to invest in restoration needs in the state. They can also use their own contracting processes rather than federal processes when hiring planners, loggers, restoration practitioners, and others engaged in work on the land.

This trend of collaborative and coordinated work was also present in USFS initiatives that lacked formal authority and funding streams such as the ecosystem management concept embraced

by the USFS in the 1990s, which encouraged increasing multi-stakeholder collaboration, the growth in interagency relationships, and using existing policy tools to improve management across ecosystems (Wear, 1996). The 2018 Shared Stewardship Strategy echoes the concepts behind ecosystem management, as well as the “all-lands” management vision of the Obama administration (U.S. Forest Service, 2009) and builds upon the tenets of the collaborative federal programs that came before it. The Shared Stewardship Strategy envisions formal partnership agreements as a foundation for achieving forest restoration outcomes at scale (U.S. Forest Service, 2018) and emphasizes partnerships with the states, tribes, and other groups to identify priority areas for management and increase coordination across jurisdictional boundaries. In particular, the Strategy highlights several focal points, including: 1) working with states to set priorities, particularly through state forest action plans, to coordinate planning and action; 2) using a suite of scientific tools to model and map risks like fire and to identify priority management areas; 3) utilizing policy tools such as GNA, stewardship contracts, and categorical exclusions under the National Environmental Policy Act (NEPA) to facilitate and accelerate forest management work; and 4) pursuing additional goals, such as working with stakeholders to develop outcome-based performance indicators, streamline internal agency processes, and expand the use of risk management principles in fire management.

States have long been important partners in the administration of federal forest conservation programs for private lands and they are poised to play a growing role in the governance of federal lands as well (Bramwell, 2013). Management practices on nonfederal lands affect the social, economic, and natural environment of the entire nation. Especially in the South, forests play an important role, having value both economically and culturally. Due to the predominance of private ownership and the productivity of the region’s timberlands, the forest industry has a strong presence in the South. Approximately 89 percent of the South's forests are held by private owners (Wear and Greis, 2012), meaning that state (rather than federal) agencies

and policies are the most influential in regulating forest management and use (Ellefson et al., 2007). The structure of forestry agencies is different compared to other regions due to the variability in management approaches in response to unique climate, topography and markets. While the South lacks the extensive tracts of federal lands found in many western states, the gradients of land use and management intensity of the landscape creates embedded natural areas that provide an array of ecosystem services (Coffin et al., 2021). Today, the South is the leading U.S. regional and global supplier of softwood timber, with a human population growing faster than the national average (Prestemon et al., 2015). The share of the U.S. population residing in the South has increased and continues to increase steadily, putting growing pressure on forests—especially near urban areas (Alig et al., 2003). In the last quarter century, both timber harvesting and forest conversion for urban uses have increased substantially in the South, leading to questions about the health, productivity, and sustainability of the South’s forests. As fragmentation and land development pressures increase, the role of federal and state government to work with owners to protect nonfederal forestlands has become increasingly important (Bramwell, 2013).

Despite the diversity of owners and fragmented ownership patterns typical of the South, several priorities are broadly shared among forest owners (Compton et al., 2006). Partnerships within the region are often built around these common priorities such as fuel management, wildlife species conservation, and restoration of historically important ecosystems like longleaf pine. Riley et al. (2019) examined the design of ongoing landscape-scale conservation initiatives in the South, identifying one of the most successful to be longleaf restoration initiatives where agencies and NGOs worked together toward a common purpose. Other examples of initiatives in the South that have been able to attain landscape-scale conservation goals for restoring longleaf pine restoration through collaboration and inter-agency coordination include the Gulf Coastal Plain Ecosystem Partnership (GCPEP) and the CFLRP for Accelerating Longleaf Pine Restoration Project in Northeastern Florida and Southeastern Georgia (Compton et al., 2006, Schultz et al., 2012). The

proposal for the CFLRP project explained that the unique involvement of the forest products industry in the project would be integral because of the currently limited market for woody biomass. However, they concluded that industry engagement will also present a unique set of challenges because agencies often lack funding and staff to move on projects in a timely manner to justify the investment of industry partners. Results from previous studies reveal that institutional attributes alone cannot guarantee success with collaborative processes; often, partnerships from forest industry or non-governmental organizations are required (Moseley & Charnley, 2014; Schultz et al., 2012). A combination of institutional and community attributes are fundamental to the use of collaboration in USFS initiatives. From an analysis of the use of stewardship contracts across the nine USFS regions, the Southern Region was found to have the highest perceived degree of collaboration (Mattor & Cheng, 2015).

Due to the distinct interests in past collaborative efforts and the perceived amount of existing collaboration in the southern region, Shared Stewardship efforts should be expected to take on different structures for implementation compared to other regions in the country. Therefore, it is important to evaluate and trace the effort across these states to understand how the Shared Stewardship Strategy is developing. In 2019, our team began conducting research on the implementation and development of Shared Stewardship, focusing on early expectations and concerns about the Strategy and its development in US West states that had signed a memorandum of understanding (MOU). (Phase 1, detailed in Kooistra et al., 2021). In late 2020, we began investigating states east of the Rocky Mountains (Phase 2), which we refer to as eastern states for ease, although this effort included states as far west as Nebraska. The present publication will focus on the USFS Southern Region (Region 8), specifically on the five states that had signed a Shared Stewardship MOU by the start of our research: Arkansas, Florida, Georgia, North Carolina, and Texas (USFS, 2020); note that other Region 8 states have signed MOUs since that time and were not included in the present research effort. We researched how the Strategy was translated into

practice, examining priority goals and investigating institutional changes at the state level to advance shared goals and priorities. The western part of the country has a very different relationship and history with the federal agencies due to the predominance of federally owned land. There has been less research on federal forest policies and partnerships in southern states. Nonetheless, pests and unwanted fires still plague these states, and the region is facing threats to forest conservation stemming from forest conversion and urbanization.

Research conducted in the USFS Southern Region can help illuminate how these states are adjusting to work across boundaries and jurisdictions. The significance of this research is that it will help us understand how a USFS strategy is adapted to the political, organizational, and ecological particularities of the Southern Region. This should provide insights related to both policy design and implementation of successful cross-boundary management for prevailing natural resource challenges. We seek to illustrate state-level perspectives from key actors and partners on perceived definitions of Shared Stewardship as an approach to land management and the tools being utilized for implementation. We hope to provide insights into how the Strategy aligns with existing approaches. The objective is to track how Shared Stewardship has developed in the early years of implementation by examining what aspects of the Strategy, if any, encouraged progress in cross-boundary work and which presented obstacles.

Methods

In 2021, we conducted 47 semi-structured and confidential interviews across the five Region 8 states that had signed Shared Stewardship MOUs before the end of 2020 (Table 1.2). In each state, we interviewed approximately eight to ten people with knowledge of Shared Stewardship and forest management issues at the state level. We sought a wide range of perspectives within each state to ensure diverse representation of relevant stakeholders and partners who were involved in early implementation of the Strategy (Table 2.2). We began with interviews with MOU signatory representatives or someone from their offices, asked for referrals, and used

snowball sampling from those referrals to identify other appropriate contacts. Snowball sampling is a method of sampling in qualitative research, which creates a sample using networking and referrals (Parker & Scott, 2019). Researchers usually start with a small number of initial contacts as participants and then ask those contacts to recommend other contacts who fit the research criteria and who potentially might also be willing participants, who then in turn would offer recommendations for other potential participants, and so on. We interviewed key stakeholders and leaders who worked in these states, including those who work in forest management or policy for federal or state government agencies, in partnership or collaboration with the USFS, represent conservation interests, or work in the forest or wood products industry at a regional or state level.

Table 1.2 Number of interviews, interview dates, and MOU signing date

State	Number of interviews	Interview dates	MOU signing date
Arkansas	10	October 2020-April 2021	September 4, 2019
Florida	8	June 2021-July 2021	August 18, 2020
Georgia	10	June 2021-July 2021	November 23, 2019
North Carolina	10	April-June 2021	September 25, 2019
Texas	9	February-April 2021	July 16, 2020
TOTAL	47		

Table 2.2 Number of interviewees by category

Category of interviewees	Number of interviews	Number of interviewees ^a
Federal agencies	20	22
State agencies	20	20
NGOs, collaborative groups, other partners not associated with the forest products industry	19	19
Partners associated with the forest products industry ^b	5	6
Total	64	67
<p>^aSome interviews were conducted with multiple interviewees present.</p> <p>^bForest products industry partners included non-agency individuals in the forest, timber, or wood products industry, as well as representatives of the industry who serve on state or national councils, associations, or advisory groups. Interviewees from NGOs or collaborative groups who focused primarily on forest products were placed in the forest products industry partner category.</p>		

Each interview lasted approximately one hour and consisted of 11 basic questions with follow-up questions asked as needed (Appendix A). The interviews were conducted over the phone or a video conference platform. Interview questions primarily focused on how the Strategy had developed within the state. We asked interviewees to discuss their perspectives on the goals of the Strategy in their state, how it extended or built upon existing efforts, and to describe any observed changes to address cross-boundary forest management in response to the Strategy. Follow-up

questions explored topics related approaches to partnerships and prioritization processes, the potential tools they need as a state to be successful, capacities with partnerships, potential performance metrics to measure success, and factors that may affect the longevity of Shared Stewardship or related initiatives.

Interviews were transcribed verbatim and then coded using Dedoose qualitative data management software. We coded the text by identifying themes in our interviews, categorizing excerpts representing these themes across many interviews, and then analyzing our findings to draw out results across pages of interview text. Prior to coding interviews, our team jointly and iteratively developed a coding strategy and performed reliability checks to confirm consistent coding across team members. We used a codebook that had been previously developed by the team in Phase 1 of the project. The codebook was created through a process of reviewing several transcripts, identifying key themes that emerged in segments of text across the transcripts, and applying and revising the codebook until reaching a consensus on code applications. Then, we determined if the same codebook could be used to code Phase 2 interview transcripts through a process of multiple analysts coding approximately eight different interviews together. Unique state examples were added as necessary to the description of existing codes in the codebook. When coding, a team member would review every excerpt coded in each state and used a systematic memo process to track emergent themes across excerpts (Saldaña, 2016). This process was repeated for each transcript, with increasing detail added to code memos about relationships within and across themes. The coded excerpts and corresponding memos were then used to construct a summary of findings for each state. For member checking, each interviewee was sent the summary from their respective state to review and verify the accuracy of our interpretations of the data (Birt et al., 2016).

Results

Perspectives on the Shared Stewardship approach

Interviewees across the five studied states consistently expected that Shared Stewardship would largely serve to formalize and expand cross-boundary efforts that predated the initiative, incorporating the efforts that build collective capacity through the involvement of state agencies, community leaders, and NGO partners. Interviewees from federal and state agencies discussed the value of working cooperatively to achieve more than any single entity could, as well as the importance of collaborative efforts when dealing with complex, large-scale problems. For example, one non-governmental interviewee from a wildlife conservation organization said, “People see it as a means to work more effectively together and collaborate to get more done in the realm of forestry and conservation...to create more of cross-boundary collaboration and increase resources and capacity” (167). Interviewees from the USFS believed Shared Stewardship would provide a renewed motivation to work with partners to leverage capacity for accomplishing land management objectives. However, four interviewees from state agencies explained that the motivation to work together was already present and that the Strategy did not change motivation. One of those interviewees felt that the only way to increase work with USFS would be if the Strategy led to partners having more authority in decision-making. Interviewees from all participant categories agreed that the USFS lacked adequate capacity to plan, coordinate, fund, and implement management activities on the lands it manages; however, some of these same interviewees identified similar limitations in state agencies. One interviewee in forest industry stated that, if implemented successfully, Shared Stewardship would lead to a “more efficient utilization of the resources that are already in place... if somehow we can streamline the bureaucracy by having these agencies cooperate and use their resources more effectively” (157). All interviewees generally saw value in the potential for Shared Stewardship to further address capacity challenges being overcome or minimized through improved coordination.

While overall there was little movement towards implementation of projects at the time of the interviews, all interviewees mentioned the possible benefit of Shared Stewardship for increasing the pace and improving the spatial coordination and extent of activities. The interviewees expected to see a greater pace of work and believed that, due to the large percentage of private land ownership in the region, the inclusion of private lands in coordination efforts would be essential for contiguous managed landscapes. Interviewees from the represented state agencies hoped that Shared Stewardship would increase the amount of cross-boundary management and collaboration in places where it does not currently exist, particularly by engaging private landowners and the forest industry. Many people pointed to the opportunity for federal and state agencies to work better with private landowners as a benefit of the Shared Stewardship initiative. An interviewee from a federal agency felt that outreach to private landowners was crucial to agency success, observing that “especially in the South, a large percentage of that land is privately owned. So, any impacts we have on the forest as a whole has to include private landowners...I don't see how we can accomplish the Shared Stewardship goals without including private landowners” (121). Interviewees across all states and participatory categories agreed that there was a need to expand outreach to non-industrial private forest landowners and industry partners to meet landscape-level objectives at the necessary pace and scale.

Underlying conditions that act as catalysts and obstacles

Interviewees described how established partnerships or relationships among federal, state, and local agencies and NGOs were being used to share capacity across boundaries. Current coordination efforts and collaborative partnerships at the state level provided a foundation for all interviewees’ understanding of Shared Stewardship. The key partners for current initiatives and plans are the same partners interviewees saw involved with discussions about developing Shared Stewardship. Existing agency staff positions, strategic plans, and various multi-partner groups or committees have existed for years to establish coordination for prioritization across agencies and

interviewees expected these roles to continue under the formal umbrella of Shared Stewardship. Cross-boundary projects have allowed various groups, including federal and state agencies, private landowners, collaborative stakeholder groups, and volunteers to accelerate activity related to forest inventory, technical assistance, monitoring, and identification of priority landscapes. In western North Carolina, local, state and federal government agencies, conservation interests and local stakeholders collaboratively developed the ‘All Lands’ Strategy to prioritize, coordinate and better deliver conservation services across the landscape. Similarly in Florida, The Ocala to Osceola (O2O) Partnership is a regionally unprecedented partnership of public agencies and private organizations working together to protect 140,000 acres of public and private land that connect the Ocala and Osceola National Forests. Lastly, in all of the states, interviewees highlighted regional landscape restoration initiatives, such as America’s Longleaf Restoration Initiative, which has been working at the landscape scale for more than 10 years to restore longleaf pine ecosystems across the southeast.

Through collaborative management plans, key partners and stakeholders have generally acted together to concentrate federal and state resources on the landscape with the best opportunity to accomplish shared management goals. One state agency employee noted that “critical needs have been determined through our State Forest Action Plan, the State Wildlife Action Plans and other plans that we look to for direction going forward” (174). Having established mechanisms for working across boundaries to develop management plans was identified by federal and state agency interviewees to be an advantage to future Shared Stewardship efforts. However, interviewees from non-governmental partner organizations added that they saw potential opportunity to streamline existing plans to remove redundancy and have constructed agency plans with amplified collaboration on assembly. Other interviewees from federal agencies also discussed integrating elements from the National Cohesive Strategy for Wildland Fire Management Southeast Regional

Action Plan and National Forest Plans into future Shared Stewardship efforts to have a collective landscape-level impact.

The primary challenges to forest management under current conditions were identified by interviewees as the loss and fragmentation of forestland resulting from urban development, changes to forest composition due to invasive species, and the effects on forest health from a changing climate, worsening fire seasons, and forest pests and diseases. All interviewees highlighted a general need to increase the pace and scale of forest management activities as well as increasing outreach to address these challenges. The majority of interviewees identified forestland conversion as a primary threat; one interviewee from a federal agency claimed, “The bigger issues in the South, in addition to what I just mentioned [increased active management], is the actual conversion of forest land...we could lose up to 23 million acres of forest land over the next 50 years. So, one of the challenges is what can we do on national forest system lands to help facilitate conservation of privately held forests” (125). This interviewee suggested agencies could help by supporting market infrastructure for timber that would provide incentives for private landowners to retain their forestland. They noted that the turnover of privately held land is one of the major challenges facing the region and could be seen as the regional equivalent of the West’s challenge with uncontrolled wildfire in terms of its scope and complexity. One USFS interviewee in the region pointed out that threats from wildfire and to forest health are all similar in urgency but felt that retention of that private forested land is a unifying challenge across the region. Interviewees representing private landowners from industry, non-governmental organizations, and agencies stressed that the current rate of urbanization resulting from increasing population is causing major losses to forested landscapes in the region. As forests are converted to other land uses and intergenerational transfer of private forests to a more urban generation accelerates, state agency and non-governmental organization interviewees expressed that conservation can only be successful through the collaboration of a diverse and nontraditional set of stakeholders.

Interviewees highlighted that the diversity in private landowners' management objectives, accompanied by a lack of sufficient federal and state agency staff for outreach, presents a challenge for forestland retention and effective implementation of landscape-scale projects. All of the interviewees that mentioned the value of landowner participation in landscape-scale conservation noted the importance of partner agencies who have established relationships with private landowners. Interviewees outside of federal agencies felt that the "buzzwords" used by these agencies were unfamiliar to many private landowners and even other non-governmental organizations that are not typical partners. Another state agency representative pointed out that there is still hesitation for private landowners to directly coordinate with the USFS, saying, "They don't really respond well to somebody showing up in a government uniform and government vehicle, telling them about their private property... figuring out ways to bridge the gap and make private landowners more comfortable to act is probably the limiting factor" (168). Interviewees from both USFS and state agencies saw leveraging the abilities of NGOs and NRCS to be crucial for filling agency capacity gaps when it came to outreach and meeting the intention for landscape-scale management and forest retention under Shared Stewardship. An interviewee from a state agency identified the NRCS cost-share agreements with private landowners to be key to addressing the priority need for increased prescribed burning, a claim supported by responses from several NRCS interviewees in the region. Another state agency interviewee added that the goals to increase planting longleaf in native regions elevates the priority need for prescribed burning; therefore, it is most effective to have partners working together to aid with restoration and prescribed burning activity. This concept is central to America's Longleaf Restoration Initiative (ALRI), which encourages longleaf reintroduction by compensating landowners for planting longleaf seedlings while also utilizing partners to assist landowners with controlled burns. Interviewees across the region agreed that there is a need for coordination when it comes to educating the public and providing resources to promote forest management across boundaries.

Interviewees in some areas also described a need to develop more robust market infrastructure for wood products, stressing that greater industrial capacity could assist land managers with restoration objectives. The forest industry was widely acknowledged as a key player in the South; interviewees saw strong timber markets as essential for maintaining resilient forests that are not overstocked. Multiple interviewees, outside of federal agencies, from different participatory categories described the supply of wood to be greater than the quantity of mills; thus, many saw a need for more mills to be built throughout the South. In Arkansas, for example, multiple interviewees discussed the lack of markets for pulpwood in the Southwest corner of the state; thus, forests are not being thinned and there are serious threats of from insect outbreaks and wildfires. A few interviewees even viewed additional market infrastructure as a solution to increase management on and retention of forested land in private ownership. One USFS employee asked, “For instance, can we help with market infrastructure for timber that would provide incentives by providing the infrastructure so that private forest landowners have access to markets... Would that buy us retention of forest land?” (125). Due to these conclusions, most interviewees noted the importance communication with forest industry representatives for moving forward with landscape-scale initiatives like Shared Stewardship.

Future of Shared Stewardship

Even though interviewees generally described Shared Stewardship as building on top of existing efforts, there were multiple interviewees that expressed uncertainties about the next steps for implementation. Of these expressed that, Shared Stewardship was defined or viewed as a vision; unlike previous policies, Shared Stewardship has no new attached authorities or funding sources but is instead built around a commitment on paper and the hiring of Shared Stewardship coordinators within the USFS. Several interviewees across all affiliations questioned whether Shared Stewardship would be integrated with other existing initiatives and programs and whether it would result in substantive changes. State-level interviewees wanted to know if higher-level goals

would impact their existing programs and resources and desired more guidance about what activities are considered to fall under Shared Stewardship. Interviewees from state agencies with previous experience with federal initiatives were concerned that this was an agreement with no action behind it, or that this initiative would disappear, at least in name, if direction for implementation was not provided soon. Interviewees believed the lack of action was due to a lack of action from leadership, at all levels, to begin steps towards implementation. Interviewees overwhelmingly said that they needed clear direction from agency leaders and partners about their expectations for Shared Stewardship implementation. Though interviewees exhibited some hesitation about the next steps, they also expressed interest in performance metrics to assess if Shared Stewardship was successfully addressing the capacity gaps and priority needs in states.

Interviewees in state agencies and NGOs expressed concern with the Strategy due to past experiences where collaborative agreements with USFS have not delivered the results they expected to see. One interviewee from a non-governmental organization wondered about future progress, stating, “I think like any agreements, sometimes they can be symbolic and sometimes they can be impactful. So, I think there's hope that it will be impactful” (167). Interviewees all hoped Shared Stewardship would lead to helpful changes in the coming years but noted the challenge of past initiatives losing momentum following changes in leadership or administration. A few interviewees from state agencies questioned if the reasoning for rolling out another landscape-scale effort was even necessary or different than past attempts. An interviewee from a state agency said, “Well, we want it [Shared Stewardship] to work but I’m telling you, this is not the first time that I've seen things out of the Forest Service over the years that were buzzwords...I remember back when I was probably your age the Forest Service was all about ecosystem management and they never could define it, but it sounded good” (133). The ideals of Shared Stewardship were understood by interviewees, but several felt that without funding or authority attached to the agreement, the strategy did not have a clear trajectory to make a difference in the

region. Interviewees suggested that the lack of confidence in this initiative could be remedied by leadership providing a clear map of intent and next steps past the signing of the agreement.

Interviewees from state agencies that were historically USFS partners expressed hesitation to increase work with the agency beyond the current levels of collaboration due to the bureaucratic “red tape” involved with working on federal land. Several interviewees from non-governmental organizations that had less extensive histories of working with USFS mirrored this sentiment. An interviewee from forest industry noted their interest in helping with forest management on federal land; however, the bureaucracy of the USFS would cause movement to be slow, making buy-in too costly. An interviewee from a state wildlife agency that has worked previously with USFS questioned the intent of the initiative saying, “I know it has the potential to work, if it would clean up some of the red tape. That would be my concern, is this just for show or is there a general genuine desire there to clean up some of the red tape associated with doing good habitat management on national forest land?” (158). More than one state-level interviewee felt that they were not truly trusted as a partner by USFS because they were only allowed to assist on federal land but not to take an equal or lead role in management activities. They noted that efforts to engage the USFS as a partner were met with mixed reactions. Some thought the USFS should allow them to have more of a say and truly embrace the opportunity to work with partners to conduct more work on federal land.

Capacity Gaps with Funding and Resources

Capacity was a major factor identified as important for facilitating the implementation of the Shared Stewardship vision. Interviewees from state and federal agencies commonly reported limited capacity, gaps in expertise, and frequent staff turnover as barriers. Capacity and expertise limitations in both state and federal agencies reportedly delayed projects, limiting the degree of coordination possible and causing frustrations for agency staff and partners. This challenge was compounded by the existing pandemic effects at the time of research and perceived instability of

funding in general. For example, one interviewee from a non-governmental organization shared that “The NGOs in the South took a big hit from COVID because they were not able to make their money through having annual meetings where they raise funding that way...So it's challenging for them right now” (164). Interviewees, including federal agency staff, reported that many offices were understaffed, overwhelmed, or lacking necessary expertise and capacity to accommodate the increasing desire for implementation of landscape-scale initiatives, like Shared Stewardship. As a non-governmental organization staff member said, “It's obvious that our national forests at least are highly understaffed...they're also very hamstrung by their internal hoops they have to jump through to make anything happen... It's very frustrating for partners and I'm sure it's just endlessly frustrating for the Forest Service staff as well” (171). Interviewees were all hopeful that Shared Stewardship would lead to more efficient uses of resources to help compensate for these gaps in capacity. However, they felt the issue was greater than what this type of initiative could address without providing funding or specific policy tools.

Interviewees felt that it was important to have more plans that propose funding sources to implement projects under Shared Stewardship, more state-level positions dedicated to advancing collaboration and communication among partners, and collaboratively developed performance measures to track and support the long-term success of Shared Stewardship. Interviewees in the region described the instrumental role of the regional Shared Stewardship coordinator in the creation and signing of MOUs. State agency interviewees conveyed that progress could be advanced and sustained with the help of a new state-level coordinator for each state and at the USFS regional offices. Finally, regularly communicating progress with the public and other stakeholders to highlight economic success and ecological outcomes was seen as essential for maintaining public support and engagement from diverse partners.

Progress to date

In general, interviewees did not yet report significant changes to prioritization, planning, or implementation processes for land management tied to Shared Stewardship in their states. Across many of the states, several interviewees expressed sentiments such as, “we’ve been doing Shared Stewardship for years.” They did not expect to see specific changes result from the Strategy because they believed they already practiced its main approaches. Interviewees in other states who did expect Shared Stewardship to result in new processes pointed to an absence of leadership direction, a lack of Shared Stewardship-specific funding opportunities and staff turnover as factors influencing the slow rate of progress. Finally, we consistently heard that COVID-19 decreased the progress of Shared Stewardship. Agency and partner organizations shifted their resources and priorities to focus on pandemic relief. Many planned in-person meetings or forums were postponed or canceled and many planning processes, including updating the SFAPs, were deferred. Interviewees from all agencies and organizations mentioned changes in budgets for management activities, especially for NGOs that depend on fundraising originating from in-person interaction.

Discussion

Contemporary land management includes a greater emphasis on landscape-level approaches that attempt to address environmental challenges at larger spatial extents, across jurisdictions, with the intent of affecting key ecological processes and protecting valuable ecosystem services (Schultz et al., 2012). Environmental governance scholarship emphasizes that interagency partnerships and collaboration are critical for accomplishing work across jurisdictions and with multiple actors (Folke et al., 2007). The challenges of future forest management in the South necessitate such approaches, and new tools like the Shared Stewardship initiative are intended to focus on priority needs across boundaries. Shared Stewardship Strategy reflects the continued recognition from agency leaders about the importance of partnerships in forest management. Our question was whether Shared Stewardship appears likely to support and increase

the achievement of cross-boundary management objectives and what underlying factors are likely to be challenges to its success. We asked these questions to inform the broader literature on initiatives that support cross-boundary collective action in land management.

Shared Stewardship can be examined as a collaborative initiative by using the definition for collaboration from Thomson and Perry (2006), which defines it as a process with five components: governance, administration, organizational autonomy, mutuality, and norms of trust. The Shared Stewardship strategy gives autonomy to the partners and stakeholders utilize the vision in the context of different states to be the most effective, while emphasizing the importance of aligning priority needs amongst partners accomplish mutuality and fostering trust through joint decision-making. However, the Strategy does not delegate specific administration, promote implementation, or create specific governance structures for support. It is for these reasons that Shared Stewardship in this region would be viewed more a coordinated management rather than collaborative and, thus, does not fall under the umbrella of collaborative governance. However, this may not be the case in other regions such as the western states, detailed in Kooistra et al. (2022), that may have governance structures for Shared Stewardship or that employ Shared Stewardship within an existing collaborative context (Amsler, 2016). Interviewees in Region 8 referred to Shared Stewardship as primarily using the term “collaboration” rather than “coordination,” but this may reflect differences between popular and academic definitions of the terms. It could also be a result of the comparison of Shared Stewardship to previous programs, partnerships, and polices that were categorized as collaborative.

The past relationships and local norms of management in this region have shaped how Shared Stewardship has been adopted and defined in different locations. Our findings for this region indicate that the conditions for Shared Stewardship are already present in existing partnerships and projects. Current interagency coordination allows agencies to combine capacities to align their efforts across jurisdictions and external partners are used to complement the capacity of their

federal partners, adding expertise and funding. Existing partnerships have the potential to serve as a bridge for organizations and actors to engage private landowners and forest industry stakeholders. Scholars have noted that bridging activities such as those exhibited in this region are critical for addressing environmental governance challenges at larger scales (Abrams et al., 2017; Decaro et al., 2017). However, unlike previous policies, Shared Stewardship did not come with new funding streams, formal administrative guidelines, or legislation. Therefore, achieving coordinated action under the Strategy presents some challenges across agencies, partners, and landowners.

As our interviews highlighted, Shared Stewardship was viewed by some as being similar to the emergence of ecosystem management, a paradigm that emerged to guide action in the 1990s, coupling new ideas for management practices with existing policies and structures (Wear et al., 1996). Shared Stewardship expands upon that concept by using existing policies and partnerships to target management activities across boundaries, to have the greatest impact on landscape-scale management, without formal guidelines. This gives individual states the flexibility to determine priority needs and use existing structures to accomplish implementation. In general, the Shared Stewardship strategy appears to have the potential to generate greater capacity through partner coordination and is viewed as a potentially beneficial tool to support cross-boundary management. However, it is not expected to trigger major changes in management practices in this region.

Our research shows that other agencies and partners were already well-versed in using existing tools and working cooperatively with the Forest Service. The post-MOU changes we identified were minor, often associated with discussion about streamlining processes for prioritization and coordination that were already in place. We did find, however, more substantive changes in some of the states. In Florida, a new Shared Stewardship position was created that was co-funded by the Forest Service and Florida Fish and Wildlife Commission, dedicated to coordination in efforts on the Ocala National Forest. In North Carolina, there was the adaptation of a new open-access tool, called the NC Data Basin, that could allow agencies and partners to

better share information to inform prioritization across the region. At the same time, a new federal position was established for coordinating Shared Stewardship activities in USFS Region 8.

While the intent of the Shared Stewardship aligned with existing efforts region-wide, progress towards implementation was variable as a result of differing local conditions. A critical factor underlying effective movement towards implementing cross-boundary work was having established collaborative relationships and processes within the state. Established relationships and adequate capacity, including the presence of a Shared Stewardship regional coordinator, facilitated initial conversations across agencies; however, the presence of a state-level coordinator was seen by many interviewees from state agencies as important for future facilitation of implementation. The common barriers to cross-boundary work, limited capacity and frequent staff turnover, caused frustration among non-federal partners. At the same time, the framework of the Shared Stewardship strategy may create room for joint action to overcoming scale challenges. Our findings indicate that more needs to be done for efforts like Shared Stewardship to ensure that agency capacity and expertise follow continued efforts to focus management objectives across boundaries, specifically private lands in this region.

Conclusion

This effort demonstrates how initiatives can be constructed to support cross-boundary work to undertake restoration and support improved approaches to forest management in the US legal and administrative context. In addition, our research supports and contributes to the policy literature by highlighting the importance of committed facilitators of collaborative efforts and collective action at the intersection of public and private lands. We also note the importance of supporting investments with adequate capacity and people with specific skillsets, in the practical context of U.S. forest management. The USFS is looking for new ways to leverage partnerships and prioritize investments to work at larger scales. By examining the effectiveness of Shared Stewardship in

tackling the challenge of larger-scale cross-boundary work, we seek to contribute to the ongoing project of finding ways to effectively undertake forest restoration and management by better fitting management approaches to the scale of ecological processes.

To expand understanding of successful strategy design for land management, it will be important for future studies to monitor progress as Shared Stewardship integrates with existing structures and processes. It will also be important to track the impact or outcomes of prioritization processes and their relationship to scientific data and collaboration from diverse partners. This study can provide a baseline for future research evaluating the long-term success of this initiative and comparing it to initiatives with similar objectives to identify which elements of design support successful cross-boundary work. In addition, there is space for further research with relevant partners, such as non-industrial landowners and forest industry representatives, to identify the needs present in different types of communities to successfully implement federal cross-boundary initiatives in the South. Finally, we relied on participant perspective of potential success in terms of improved resilience of forest, wildlife, and ecosystem management conditions. These considerations emphasize the importance of determining success by monitoring and measuring the extent to which the Strategy resulted in significant changes in the roles of partnerships and impacts to landscape management, along with the factors that encouraged or barred such changes. A next frontier for research in this arena will be to examine standardized means for measuring the success of strategies like this across agencies and the landscape.

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CHAPTER 4

MAJOR CONCLUSIONS AND FUTURE RESEARCH

Summary of Results

The U.S. Forest Service's 2018 Shared Stewardship Strategy marked a renewed vision for how the agency approached forest management planning and implementation by formalizing relationships with states and other partners to increase the pace and scale of cross-boundary work. Initiatives like the Shared Stewardship Strategy reflect acknowledgement from agency leaders of the importance of partnerships in forest management. Collaborative processes are central to successful partnerships, and both collaboration and partnerships featured in implementation of the Shared Stewardship Strategy. The primary objective of this study was to investigate the early implementation of Shared Stewardship in the eastern U.S., particularly looking at the opportunities and challenges it presents for the region. It was clear that the way that Shared Stewardship implementation was playing out was a unique reflection of the region's existing conditions, past efforts, and approaches for supporting collaboration. The outcomes identified through this analysis reflect the intent and broad nature of the Strategy, which allows partnerships and cross-boundary work to evolve differently in each state. However, the lack of dedicated funding sources or official administrative guidelines for Shared Stewardship also led to challenges when determining next steps for implementation. Although Shared Stewardship builds upon past policies and efforts to promote partnerships and cross-boundary work, many stakeholders understood the vision but highlighted the need for more direction regarding expectations for implementation.

In chapter 2 we examined the initial responses to Shared Stewardship in the eastern states and compared our findings to the first phase of our research in the western states. In the construction of this practitioner paper, we found that there was a lack of progress towards implementation due

to many states still being in the process of conceptualizing the next steps for implementation. However, we did find that interviewees were enthusiastic to have a renewed vision for improving cross-boundary management and to have more conversations about effective management as opposed to a “scattered shot-gun approach.” Changes to management approaches at the time of our interviews were reported to be minimal and most interviewees felt that Shared Stewardship simply formalized ongoing efforts; however, there were some notable changes following some states signing a MOU. One of the most interesting examples is Massachusetts, which does not have any federal forestland but is utilizing the tenets of Shared Stewardship to forge a relationship with USFS and begin work on a collaborative undertaking called the Mohawk Trail Woodlands Partnership. Overall, the consistent themes we found in the eastern states were not substantially different from what we found in the western states, with some exceptions due to existing interagency relationships and history with previous initiatives.

USFS Region 8’s past collaborative efforts and long-standing partnerships set the stage for analyzing the implementation of Shared Stewardship in Chapter 3. We analyzed the adoption of Shared Stewardship in the context of a region with a rich history of successful collaborative efforts, high proportions of privately owned land, and the strong presence of forest industry. We found that existing efforts aligned with the vision of Shared Stewardship and few changes were expected. Most interviewees felt that the key components of the Strategy were already present and that the Strategy represented a formalized means to revisit approaches to cross-boundary management. The regional Shared Stewardship coordinator played a key role in encouraging states to sign MOUs; however, many felt implementation would be more likely in these states if there were a state-level coordinator encouraging movement past signing the agreement. The changes identified following the MOU were minor and often associated with dialogue about how to make existing processes for prioritization and coordination more effective at addressing management across the landscape. However, there were more substantive changes in a few of the states. A new Shared Stewardship

position, co-funded by the Forest Service and Florida Fish and Wildlife Commission, was created to improve coordination of efforts on the Ocala National Forest. The adaptation of a new open-access tool, called the NC Data Basin, was developed in North Carolina to allow agencies and partners to better inform action for priority needs across the region through a shared platform. Common obstacles to implementation of cross-boundary work on the landscape scale were found to be limited agency capacity and frequent staff turnover, causing frustration among partners. Still, partners felt that the structure of the Shared Stewardship strategy is poised to create space for joint action to overcome the challenges with capacity. Our findings indicate the importance of the vision behind the collaborative intent of Shared Stewardship and the continued need to focus efforts across boundaries to have the greatest impact on the landscape.

Implications for Practitioners

The research presented in Chapter 2 provides practical and theoretical insight to the advancement of collaborative forest management approaches by focusing on USFS implementation of Shared Stewardship. This research phase focused on the adoption of the Shared Stewardship ideas in USFS regions east of the Rocky Mountains. These findings provide practitioners with a follow-up to the implementation and development of Shared Stewardship efforts in the western U.S., detailed in Kooistra et al. (2021). This provides an overview of our key findings across the eastern states and our observations on the future of Shared Stewardship, with a brief comparative analysis to the western states. The main differences in findings across the western and eastern phases of our research reflected different contexts, histories, and available tools and resources for implementing Shared Stewardship. Across all states, relationships between agencies and partners were identified as important to landscape-scale management, particularly with staff turnover and the impact it has on collaboration. However, in the eastern states the predominance of privately owned land exacerbated this challenge due to the need for more public outreach. This chapter allows for partners involved with Shared Stewardship to easily see how the strategy is playing out

in their state in comparison with others, thus allowing for practitioner application for future implementation of Shared Stewardship.

The findings in Chapter 3 about current interagency coordination in the region allowing agencies to combine capacities to align their efforts across jurisdictions and the use of external partners to supplement the capacity of their federal partners, builds upon previous claims in the literature that institutional attributes alone cannot guarantee success (Moseley & Charnley, 2014; Schultz et al., 2012). As noted in previous studies (Riley et al., 2019; Schultz et al., 2012), there have been successful cross-boundary efforts in the South regarding longleaf restoration using policy tools like the CFLRP, where agencies and NGOs worked together toward a common goal. However, unlike previous policies, Shared Stewardship did not come with new funding, formal administrative procedures, or new formal policy tools. As a result of the nature of Shared Stewardship and the experience with successful collaborative programs, agencies and partners are tasked with integrating the broadly defined initiative within the existing set of historically collaborative relationships, prioritization processes, and policy tools while navigating diverse factors in the region that are challenges for improving collaborative processes. Our findings about the importance and role of pre-existing processes and partnerships for pursuing Shared Stewardship in the region reflect the challenge practitioners face in implementing a strategy without dedicated funding, resources, positions, or specific direction.

Future Research and Implications for Academics

For academic audiences, Chapter 2 may provide an effective example of qualitative research being presented as a public resource with easily digestible results and practical application. It attempts to combine the strengths of both academic and non-academic discussions on cross-boundary forest management on the landscape. Manifestation of Shared Stewardship intentions in specific projects across the eastern states provides valuable insights into how existing factors interact to affect implementation activities in practice. In turn, it will also be important for future

academic research to understand and track how experiences with processes like joint prioritization affect future partnerships and decision making. These reflections about the future of Shared Stewardship point to the need to measure, monitor, and evaluate the success of the Strategy to track changes on the landscape and identify factors that encouraged or challenged those changes.

At the regional scale analyzed in Chapter 3, the findings provide academics with potential answers for understanding how broadly defined initiatives, like Shared Stewardship, are translated to implementation on the ground. The conclusions of Wear et al. (1996) regarding the emergence and application of ecosystem management are potentially applicable to Shared Stewardship, since both concepts use existing policies and partnerships to target management activities across boundaries without formal guidelines. Although similarities between those concepts were highlighted, we concluded from interview responses that Shared Stewardship does seem capable of generating greater capacity through partner coordination to be a potentially beneficial tool to support cross-boundary management, even if it is not expected to prompt major changes in management practices in this region of the country. In addition, our research supports and contributes to the policy literature by highlighting the importance of committed facilitators of collaborative efforts and collective action at the intersection of public and private lands (Abrams et al., 2017; DeCaro et al., 2017; Schultz et al., 2019). This chapter provides academics with an initial look at how states with extensive private land ownership and historical cross-boundary work are approaching the implementation of new management programs for improved coordination across the landscape. The development of such efforts is vital for landscape-scale forest management as academics and practitioners alike try to address capacity gaps under increasingly challenging environmental conditions.

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APPENDIX A
RESEARCH METHODOLOGY

Our analysis began by conducting interviews in each of the states we chose to study: Arkansas, Florida, Georgia, North Carolina, and Texas. These states were selected based on having signed MOUs at the time we began this phase of the study in fall of 2020 and being in USFS Region 8. To choose interviewees, we utilized snowball sampling in order to reach all the relevant stakeholders and partners. Snowball sampling is a popular method of sampling in qualitative research that creates a sample using networking and referrals (Parker & Scott, 2019). Researchers usually start with a small number of initial contacts who fit the research criteria and are asked to become participants. These participants are then asked to recommend other contacts who fit the research criteria and who potentially might also be willing participants, who then in turn would offer recommendations for other potential participants, and so on. In this case, we began by interviewing signatories on the MOU and then asked for recommendations from those interviewees to provide potential contacts for future interviews. We sought to attain saturation, a methodological principle in qualitative research that indicates further data collection is unnecessary (Saunders et al., 2018). We aimed to conduct roughly ten interviews per state. However, the exact number per state was dependent on response within the time frame of the study, whether we had reached a variety of stakeholders, or if recommendations from interviewees became repetitive.

Interviews were semi-structured, following an interview guide developed for the project, and were about one hour in length (Appendix B). Each interview was recorded, with permission, for the most accurate documentation of conversations. An identifier with the state name and number interview for that state was assigned to each recording to ensure that each was de-identified. We also noted specific descriptors for each interview such as participant category, participant scale, and whether they were a signatory on the MOU.

Audio recordings of interviews were then transcribed using transcription services, Rev and Otter. The transcripts often have flaws from the automated transcription and are not yet de-

identified of the interviewee's personal information. Therefore, the next step in this process in to "clean" each transcript by removing filler words such as "um", redacting any identifying information, and correcting any words that were transcribed inaccurately. Throughout the "cleaning" process, the audio from the interview is played and compared to the transcript to ensure the document reflects the interview with the upmost accuracy. The "clean" interview transcript is then used for the next step in analysis, coding.

Transcripts were exported to Dedoose, a software used for coding qualitative research, and each interview was thematically coded using a codebook that was collaboratively developed for the project. A codebook is a set of codes, definitions, and examples used as a guide to help analyze interview data. Creating codes can be theory-driven, data-driven, or driven by research goals (DeCuir-Gunby et al., 2011). Codes are tags or labels used to allocate units of meaning to the qualitative information compiled during a study. In our case, codes for the codebook were developed from interview data and our research questions. Our codebook contained 23 different codes, each with descriptions, such as "governance and power", "prioritization", "priority needs", and "inter-agency relationships". The coding process consisted of assigning these previously defined codes to the raw excerpts for each interview transcript. To ensure intercoder reliability, we started by coding interviews together as a team to reduce coding errors and discrepancies between different coders (Campbell et al., 2013). We continued this coding exercise until we achieved a satisfactory outcome of 90 percent, or better, of excerpts being assigned the same codes by the team. Using a systematic process, excerpts were also given memos as necessary to indicate interrelatedness of the assigned thematic codes and explain the coder's thoughts on the development of themes (Saldaña 2016; Williams and Moser, 2019).

Once interviews were coded, the excerpts with the assigned codes and memos were exported to an Excel spreadsheet for further analysis. We organized and filtered excerpts by assigned code to begin creating our chain of evidence, which is used to support claims from our

analysis by adding internal consistency and rigor (Yin, 1994). To accomplish this, we created a separate document for each state including headings for each emergent theme we documented through the coding process and corresponding excerpts below each heading. We also made note of how many interviewees agreed with that claim and if there was any disagreement. The chain of evidence document was used to construct a summary for each state, detailing the emergent themes and trends around the implementation of Shared Stewardship. The state summaries and chain of evidence documents were used to inform our claims outlined in our results section for any publications.

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APPENDIX B
INTERVIEW GUIDE

Role, priority needs/current issues and approaches, familiarity with Shared Stewardship

(SS)

- 1) Briefly describe your **current position or role** with your agency or organization.
- 2) What are the **priority needs for improving management** of forests across the state?
- 3) Please discuss your **familiarity with the intent of the Forest Service's SS strategy** and how you've been involved with efforts related to the strategy in your state?
 - a. What were the state's **motivations or goals** for signing on to SS?
 - b. What are the main **opportunities and risks** associated with more state-level engagement in cross boundary forest management?

Current assessment of SS in the state

- 4) How does the SS strategy/approach align with **existing forest management efforts** in the state? **Has anything changed** since the SS MOU was signed in the state?
 - a. Have you observed any **new approaches** as part of SS yet in the state?
 - b. **What's working well** and is there anything giving cause for **concern**?
 - c. What have you **heard from the field** in terms of requests or questions about SS?
- 5) Who are the key **partners** that you've seen being directly involved in SS in the state, and how so?
 - a. Are there any key **partners or perspectives that are missing** from SS efforts?
(e.g., Tribes, industry, counties or local municipalities)
- 6) In what ways, if any, do you think more formal state-level and partner engagement **may affect decision-making, prioritization, and implementation** of cross-boundary forest management?
 - a. How has SS been integrated into the State **Forest Action Plan**?

- b. How might SS affect approaches to prioritization and implementation on **private lands**?
 - c. What types of **scientific information or decision support tools** have been most helpful to inform prioritization, and is there a need for different scientific tools or information support?
- 7) What kinds of **capacities** are needed to move forward successfully with SS-related work in the state (e.g., funding, budgets, staff, training, scientific tools, forums)?
- a. Which **authorities and mechanisms** will be most helpful for doing SS? Is more direction needed about how to use the existing tools to work across boundaries?
- 8) What types of support or direction could the **W.O. of the Forest Service, or state leadership, provide** to facilitate successful implementation of SS?
- 9) What are the main **challenges or gaps in federal, state, or local policies** that affect the implementation of SS in the state?

Future of SS

- 10) What are the most important **factors that will influence the longevity** and value of SS?
- a. How might **changes in administration or leadership** affect SS or cross boundary approaches and partnerships in general?
- 11) What **performance measures, indicators, or metrics should be used to assess the effectiveness of SS** and who should be involved in determining and monitoring those measures?

Additional info

- 12) **Do you have any recommendations for other people we should talk to** for state-level perspectives about SS in the state? (agencies, partners, industry.... especially if they have different opinions)

13) Do you have any recommendations for case studies of SS specific projects that are reaching implementation in the year 2021

14) Is there **anything else** we should know about that we didn't ask about?

15) Is it okay if we **contact you again** if we have clarifications or follow up from this conversation?

Extra - if time allows - questions

16) Do you anticipate any other **effects, consequences, or impending changes** related to SS in [state] that we haven't talked about?

17) Do you think that SS will change how **targets** (e.g., timber, acres treated) are developed on national forests and other lands in the state?

18) Are you observing **differences** across the state in how SS is playing out? What is driving these differences? What is driving how SS is being implemented or received across the state?

19) Can you identify any **specific examples** that you think represent or are likely to represent particularly successful or unsuccessful approaches to SS in [state]?

20) In what ways could the approach to SS and SS implementation in **adjacent or other states** affect the approach or implementation in your state?