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Navigating social forestry – A street-level perspective on National Forest management in the US Pacific Northwest

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ABSTRACT

US forest policy changed dramatically during the 1990s and fundamentally altered National Forest management in the Pacific Northwest. Via the Northwest Forest Plan, the previous emphasis on timber production was replaced with a broader set of objectives and collaborative management approaches became increasingly important. Yet the legacies of past institutions, such as those related to budget structures and planning processes, continue to weigh on contemporary dynamics of policy implementation in the current 'social forestry' regime. The convoluted nature of the current forest governance system's emergence raises the question of how it affects policy implementation at the local level. We rely on 35 qualitative interviews with various actors involved in public forest management on the Siuslaw and Willamette National Forests in Oregon to understand how multiple and contradictory policies, combined with local stakeholder involvement, influence management decisions. We find that forest management takes place in a vetocratic and neoliberal institutional setting: the implementation of projects is contingent upon getting past numerous veto players who, at the same time, increasingly take on tasks formerly assigned to government entities

1. Introduction

The Record of Decision finalizing the Northwest Forest Plan (NWFP) in 1994 represented a dramatic shift in US forest policy and management. Conflict surrounding federal forest management—in particular the introduction of roads into roadless areas and the logging of old-growth forests—had grown in the preceding decades, but the US Forest Service (USFS) had been able to avert any substantial changes to its management objectives and agency mission, which prioritized timber production (Salka, 2004). A series of laws passed in the 1960s and 1970s removed some of the agency's autonomy and acted to complicate its traditional focus on timber production and fire suppression. Although these laws created new procedural and substantive obligations on the part of the USFS, no significant changes in management emphasis took place until the late 1980s, when environmental organizations—with the backing of the courts—forced the agency to stop all timber harvest activities in the Pacific Northwest until it could provide a scientifically credible plan for protecting the Northern Spotted Owl (*Strix occidentalis caurina*). The NWFP was an attempt to create a new, science-based foundation for management decisions that would hold up to legal scrutiny and balance the multiple societal demands placed on federal forest land, including timber production, ecosystem restoration, species protection, and recreation (Hirt, 1994; Salka, 2004; Thomas et al., 2006).

The NWFP entailed the designation of large tracts of federal land for sensitive species protection and instituted ecological safeguards even in those areas designated for continued harvest, resulting in a drastic reduction in timber production on the federal forests. The relative decision-making autonomy previously enjoyed by the Forest Service was replaced by extensive analysis and consultation requirements that created numerous opportunities for regulatory agencies, organizations, and individuals to slow, stop, or alter proposed projects. Mandated participation via agency-created public advisory groups had little impact and faded away quickly (Moseley and Winkel, 2013; Salka, 2004; Thomas et al., 2006; Wondolleck, 2000; Yaffee, 1994), yet as of today, many National Forests do collaborate with a variety of stakeholders. These efforts are the result of bottom-up, grass-roots processes that evolved parallel to the science-driven, top-down approach to resolving the conflict surrounding forest management via policy. Multi-stakeholder groups that typically include local citizens, local governmental representatives, environmental activists and timber industry representatives have formed to address conflict over forest management

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at the local level by identifying management activities that would satisfy the diverse set of demands placed on federal forests. Collaboration between land management agencies and such place-based groups has become integral to much public land management in western US and has been institutionalized through legislation such as the Collaborative Forest Landscape Restoration Act (CFLR) (Moseley and Winkel, 2013; Winkel, 2014). According to Winkel (2014), a new mode of forest governance termed 'social forestry,' in which societal considerations and collaborative processes drive much USFS decision-making, has become the new forest management paradigm since the mid 2000s.

Overall, the combination of top-down policy changes and bottom-up collaborative processes has redefined forest management objectives and processes, creating what Moseley and Winkel (2013) describe as a "complex, hybrid system." For example, while social forestry emphasizes restoration-oriented, collaborative management, the institutional legacy of federal land management rests upon output-oriented budget structures, the primacy of agency expertise, and use of the courts as a venue for conflict resolution, all of which limit the agency's ability to manage collaboratively (Butler, 2013; Butler et al., 2015; Hays, 2009; Moseley and Winkel, 2013; Nie and Metcalf, 2015). The forest rangers tasked with implementing forest policy within the NWFP area have been—and continue to be—faced with a perplexing array of legislative, judicial, and executive directives in addition to a diverse set of well-organized and well-informed public interests. This raises the question of what the social forestry paradigm means for forest management decision-making at the local level: how does it influence local managers' decision-making and what does it imply for achieving management objectives? Because of the multiple-use mandate of the agency and the managerial discretion afforded to forest rangers and supervisors, this decision-making process greatly influences the provision of both social and ecological costs and benefits from public forestlands. Through an analysis of qualitative data gathered via interviews with key informants associated with the Willamette and Siuslaw National Forests in western Oregon, two forests operating under the purview of the NWFP, we investigate how the implementation of federal forest management occurs in practice under the social forestry regime, with its countervailing and "hybrid" systemic influences.

2. Literature

Created in 1905 during the Progressive Era, the USFS was long celebrated as a prototype of merit-based bureaucracy, equipped with university-educated staff, a clear mission and autonomy from congressional interference. It was considered the quintessential successful public administration and was admired for its efficient implementation of management objectives (Kaufman, 2006). Yet with changing societal demands, the agency's strengths of efficiency and independence eventually turned into weaknesses, and today it is regarded by many as a bureaucracy that is hobbled by its own labyrinthine administrative procedures and whose decisions are vulnerable to constant challenges (Fukuyama, 2014; Hays, 2009). In between, the agency lived through several phases with distinct orientations regarding societal demands towards forests, management objectives, as well as a distinct relationship with the public: from custodial management (protecting national forests from overharvesting by private enterprises) in the early years to wood production, especially following World War II when the agency became a major timber producer and came to support many resource-dependent communities in the West (Hays, 2009).

As early as the 1950s, an increase in federal timber harvest began to trigger opposition by conservationists and recreation groups (Burnett and Davis, 2002; Hirt, 1994). In response, Congress passed a number of laws, starting with the Multiple Use Sustained Yield Act (MUSY) (1960). MUSY recognized the outdoor recreation and other forest uses as having equal importance as timber harvest, but, importantly, it also secured the USFS's decision-making authority (Burnett and Davis, 2002). Soon after, concerns by scientists as well as the public about the ecological effects of extensive clearcut logging on federal lands resulted in passage of the National Forest Management Act (NFMA) of 1976, which emphasized ecological values and introduced public participation into forest policy. NFMA emphasized rational planning, public involvement, and protection of environmental values (Moseley and Winkel, 2013). This same time period also saw passage of a number of broader environmental laws that affected all federal agencies. These included the Wilderness Act of 1964, the National Environmental Policy Act (NEPA) of 1969, which required disclosure of the environmental impacts expected through federal actions, and the Endangered Species Act (ESA) of 1973, which required the protection of threatened and endangered species (Brunson and Kennedy, 1995). However, the Forests Service's interpretation of its mandate—to optimize resource outputs and to supply rural industry, which in turn provided employment to rural communities (Kennedy et al., 2001)—continued to guide forest management decisions even in the face of increasing public criticism.

Ultimately, a court ruling in response to a lawsuit by environmental organizations in 1991 forced the agency to halt timber harvest until a plan to protect the endangered Northern Spotted Owl was developed. By that time, the Forest Service was facing a crisis of legitimacy (Marshall and Goldstein, 2006). The new legal framework, including the NWFP, not only entailed a shift from rational planning to "ecosystem management" as the new forest management paradigm in the Pacific Northwest, but also replaced the Forest Service's previous autonomy with increased Congressional oversight and a multitude of documentation requirements, including extensive planning and analysis processes as well as stakeholder involvement (Abrams et al., 2015; Hays, 2009; Johnson, 2007; Shannon, 2004). This period of conflictive and science-driven management has itself given way to another "epoch" labeled by Winkel (2014) as 'social forestry.' This term refers to the growing importance of local and regional actors in forest planning processes, and is described as challenging ecology as the dominant management paradigm.

Rather than replacing one another, remnants of each of these prior phases persisted, collectively posing barriers to the contemporary implementation of management objectives (Cashore and Howlett, 2007; Moseley and Winkel, 2013; Predmore et al., 2011; Thomas et al., 2006; Winkel, 2014). According to Cashore and Howlett (ibid.), this is because the policy change leading to the NWFP occurred without changes to the Forest Service's legal framework or associated management objectives. Instead, the shift towards ecosystem management added layers of analysis, planning and disclosure requirements as well as stakeholder involvement to the Forest Service's tasks, while elements of rational planning of the post-war era—in particular the timber-based funding structure—remained in place. Hoberg (2001) uses the term 'pluralistic legalism' to describe the institutional regime resulting from these fundamental changes to "relations between citizens, Congress, courts and the administrative state" (p.60). Fukuyama (2014) argues that these multiple and layered institutions—along with their corresponding veto points and veto players—results in a "vetocracy," a system characterized by a structural bias against efficient and decisive action. The USFS is thus seen as emblematic of larger systematic weaknesses of the American political system, which provides an overabundance of checks and balances and a proliferation of veto players. Under this perspective, tasks traditionally performed by the executive branch's bureaucracy have been increasingly performed by judges and elected representatives, leading to increasing influence of interest groups and judicialization of administration. According to Fukuyama, the result is incoherent policy-making that rarely ends in decisive outcomes, but leads instead to costly litigation and frequent gridlock.

In addition to the loss of bureaucratic autonomy, the USFS has also experienced a loss of operational capacity. For much of the twentieth century, timber receipts were used to fund many key USFS operations and hire staff (O'Toole, 1988). The legacy of this funding mechanism is problematic in part because the drop in timber harvest that followed the NWFP translated directly into decreased available operational

funds, and also because increasing proportions of congressional appropriations for the USFS have been funneled toward wildfire suppression. Thus, since enactment of the NWFP, the Forest Service has been left with lower staffing levels and less operational funding even in the face of more complex analysis, planning, and public involvement requirements. In this context, reliance upon external funding sources and cooperating partners has become a key strategy for USFS managers (Abrams et al., 2015, in press; Cheng et al., 2011; Derr et al., 2005; Larsen, 2014).

A number of scholars have argued that the decline in Forest Service capacity and autonomy, and the rise of collaborative management approaches are realizations of the same neoliberal ideas that have "become nearly hegemonic in the most powerful national and international arenas" (McCarthy, 2005, p. 996). Evidence of the neoliberalization of the USFS comes not only in patterns of reduced public support for agency operations (Abrams, 2011) but also through the increased dependence on non-state actors for planning and implementation of management (Abrams et al., 2015; Larsen, 2014; McCarthy, 2005). It is important to highlight, however, that USFS governance networks with external actors are complex and uneven: the agency has often been hesitant to cede substantial authority to community-based organizations and actors (Selfa and Endter-Wada, 2008), and the net result of these governance networks may be a reduction in the effectiveness of forest management rather than an improvement (Charnley et al., 2015)

Based on this literature, the contemporary institutional regime surrounding federal forest management in the Pacific Northwest can be conceptualized along four main elements: 1) multiple, at times conflicting, layers of institutions from past eras that continue to influence decision making at the local level, including a series of institutional incentives and legacies that create enduring incentives to harvest commercially valuable timber; 2) a shift in funding from long-term forest management to short-term emergency management (principally fire suppression and fire risk reduction); 3) a large number of veto players and veto points that create a highly "vetocratic" system; and 4) an increasing importance of non-state actors at local to regional scales that help to fill in for missing capacity, funding, and legitimacy within the agency.

While such trends have been theorized and investigated at broad scales, it remains unclear how the social forestry paradigm as a whole manifests itself in rangers' management decisions on the ground. In the following analysis, we examine two forests operating under the NWFP to better understand how individual USFS managers navigate this highly complex policy, social, and economic context. In doing so, we attempt to provide insights on the nature of the social forestry regime that may be applicable beyond the Pacific Northwest.

3. Methods

We rely on 35 semi-structured, qualitative interviews with individuals involved in management decision-making on the Willamette and Siuslaw National Forests in western Oregon (hereafter referred to as 'Willamette' and 'Siuslaw' respectively). Interviewees were selected largely based on recommendations by experts familiar with forest management issues in the region and subsequent recommendations for further key individuals (snowball sampling). Some of the interviewees were selected based on their position as a district ranger and forest supervisor, as they are the official decision-making authorities. The resulting sample of interviewees represented all ranger districts on both forests. Once the suggestions for additional interview partners largely matched the sample, the sampling was closed. About two thirds of the interviewees were Forest Service staff members, including district-level personnel, district rangers, forest supervisors and members of their office staff. The remaining third of the interviewees were stakeholders involved in forest management at the district level. They included representatives of stewardship groups, environmental organizations, watershed councils, private landowners, state agencies, scientists, and forest industry. Overall, about half the interviewees represented each of the two forests, with three individuals having worked on both forests and two researchers not directly associated with any forest. Topics covered in the interviews included the development of federal forest management since the passage of the NWFP, perceptions of the most important management objectives, and decision-making processes, including the roles different actors from within and outside the USFS play in the decision-making process, perceptions of USFS management autonomy, the relationship between the USFS and local stakeholders, and perceptions of management effectiveness. The interviews were conducted in person between March and May of 2015 and lasted between 1 and 2.5 h. All interviews were audio recorded, transcribed and coded following Mayring (2010).

In the pre-NWFP era, the Siuslaw and Willamette were among the prime timber producers in the country. Today, they can be understood as representing two ends of a spectrum; the Siuslaw represents the 'ideal' type of a restoration-based, collaborative forest while the Willamette is expected to produce commercial timber and has historically had less well developed collaborative structures. Thus, rather than being representative of national forests more broadly, our cases are extreme examples that serve to illustrate the range of street-level decision-making that occurs under the common framework of the NWFP (Seawright and Gerring, 2008) (Fig. 1).

4. Results

4.1. Siuslaw national forest

> *"This forest was one of the top timber producers in the nation. It had a massive timber harvest program. And that was its identity. And when the NWFP came along […] in essence, over 90% of our forest was designated as old-growth or riparian reserve. And the area that was actually available for doing harvest was so tiny that it was impractical. So, in essence, we went from an expectation that we would produce 300–400 million board feet of timber per year, to zero." (USFS Siuslaw)*

Under the NWFP, most of the Siuslaw's forest holdings were designated as 'late successional reserve' (LSR) and 'riparian reserve' (RR), allocations that prioritize ecological values. In light of this change, Siuslaw managers reoriented toward ecological restoration as the primary management objective on this forest. Yet due to the institutional legacy of past emphases on timber production, federal funding is closely tied to expected levels of timber harvest. Thus, the Siuslaw was forced to find a way to conduct commercial forest management despite its reorientation toward restoration and conservation objectives. Based in large parts on the initiative of the Forest Supervisor at the time, the Siuslaw as a whole developed a program of thinning densely stocked monocultures that grew in the place of former clear-cuts (known colloquially as "plantations") to accelerate the development of late-successional characteristics. Plantation thinning and aquatic restoration soon became the primary management activities, and timber was produced largely as a by-product of these activities. However, because of the high forest productivity of the Siuslaw, it has been able to produce a reliable amount of timber—around 40 million board feet annually—through restoration thinning in plantations under 80 years of age. The thinning volumes are set by the forest itself and serve as the main funding mechanism for the forest's operations, including its restoration program. About half of the timber receipts generated are channeled into stewardship contracting[1] programs for restoration projects.

[1] Stewardship contracting is a tool intended to support restoration on federal land while providing economic benefit to rural communities. It enables the Forest Service to contract out restoration work in a stewardship area that was previously defined in collaboration with a community partnership (watershed councils, government agencies, Soil and Conservation Districts, other interested groups etc.). The contracts focus on the "end result" ecosystem benefits and outcomes, rather than what's removed from the land. For more details on stewardship contracting see (United States Department of Agriculture -

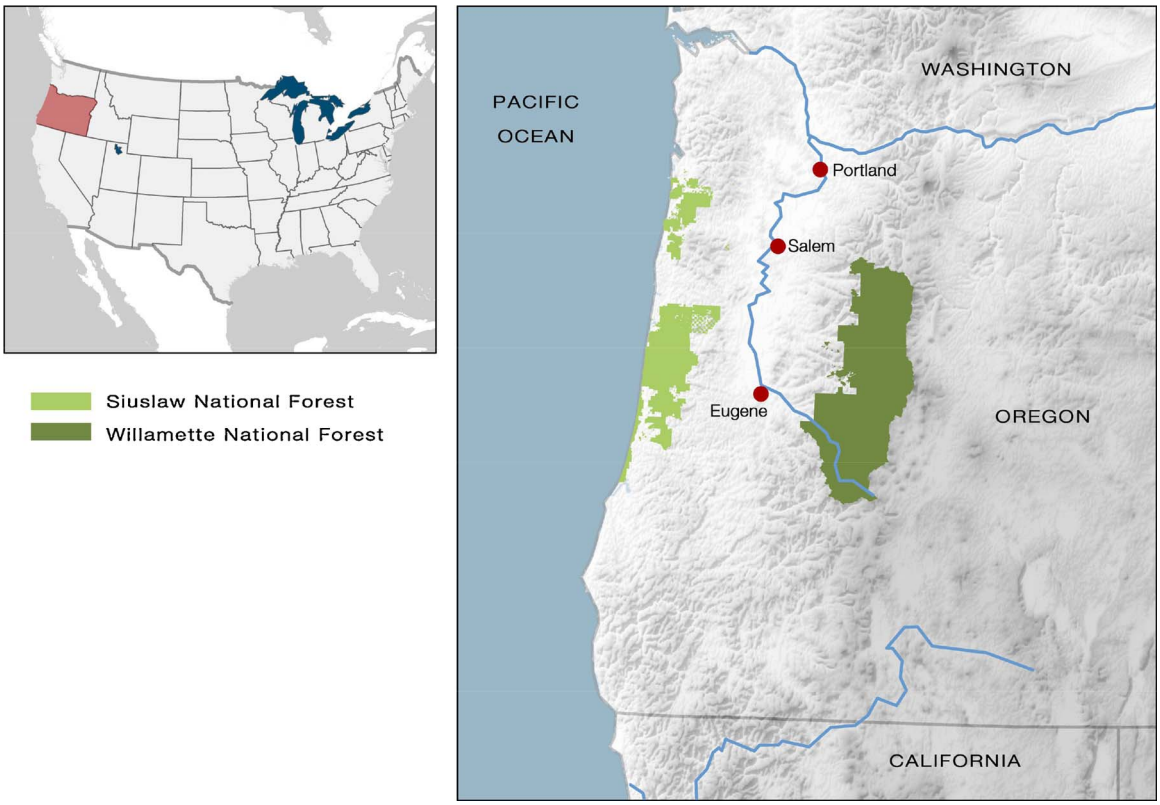

Fig. 1. Map of study area in Oregon, USA, including the Siuslaw (630,000 acres) and Willamette (1.7 million acres) National Forests.

The Siuslaw's replacement of traditional timber production with restoration is credited by interviewees with also eliminating much of the prior controversy surrounding forest management that is still present on other forests. *"The […] reason we are so successful is we have a primary purpose on the landscape and that is LSR. So that's pretty easy to do. If it's not moving a stand of trees towards this idea of features found in late successional reserves, we don't do it. So that's pretty cut and dry."* Some interviewees also pointed to a number of essential contextual factors that facilitate the Siuslaw's management: aside from the LSR designation, this includes the infrastructure surrounding the forest and its productivity: "*I call it the perfect storm here. Because we grow trees here really fast, this is some of the most productive site in North America. So that's a big advantage. We still have an industry around us. […] Because we […] are surrounded by private commercial timberland we still have the mills, we still have the logging companies, we still have the road systems, […] our haul distance is relatively good."* These factors collectively mean that the Siuslaw can count on the presence of a robust local industry to bid on and purchase thinning contracts, and the combination of access and tree growth rates ensures that the value of timber removed will usually exceed the costs of hauling and processing.

Notwithstanding these favorable contextual factors, the Siuslaw's success—as measured by its large stewardship program, reliable timber output, and no litigation of management decisions in years—is largely attributed to its relationships with its 'partners'; the Siuslaw features a longstanding active stewardship contracting program, with close collaborations between the Forest Service and diverse stakeholder groups that include conservation organizations, watershed councils, state agencies and citizens—many of them quintessential "veto players" for USFS decisions. These 'partners' are included in the decision-making process early on. Typically, upcoming decisions are shared and discussed ahead of time through formal and informal means, so that the proposed action already takes into account the partners' concerns. One Forest Service staff member explained that the partners are involved so early in the district-level planning and decision-making processes that it is difficult to attribute elements of the resulting proposed action to one of the involved parties: "*It's organic. It's not like Lego. It's more like balls of play-dough all swirled together. So to try to pull it apart is kind of hard to do.*" While the local timber industry is key to making the thinning program work, it is not strongly represented in the core groups of stakeholders involved in decision-making progresses.

The relationships with partners is considered key to the Siuslaw's success: "*The number one reason why this forest is so successful is because of trust. Individual people trust other individual people. And not just internally but externally as well. So we've got a lot of external partnerships and other entities and agencies that we have a very trustful, respectful working relationship with.*" Interviewees point to a number of specific benefits of working closely with stakeholders. One relates to gaining local legitimacy (often called "social license" or "social acceptability") for management activities and working to build public trust in the agency. Stewardship groups, for example, are described as a link between the agency, individual stakeholder groups and the larger public. As one ranger put it: "*There is a big outreach and education component to the stewardship groups. They [partners] are often out there telling our story, which has a much more meaningful impact than us telling it ourselves, particularly for those folks who have a general distrust of the federal government.*" Another statement reflects the USFS emphasis on not appearing too dominant in the public eye, illustrated by this district ranger's description of her own role as a coordinator and facilitator who shares decisions, rather than as an autonomous decision-maker: "*I think our role is 90% convener and facilitator. If we want to advocate for a position, it's probably good to somebody else in the community who also wants to advocate for it. And if we find ourselves acting as the advocate, then I think we surrender some of our ability to convene and facilitate.*" Furthermore, existing partnerships were described as a shield against the influence of more belligerent veto players; there was a sense that

(*footnote continued*)
Forest Service, 2009).

these entities may be less likely to challenge Forest Service decisions that are reached with local collaborative input and support. The legacy of the USFS' crisis of legitimacy thus contributes to the local stakeholder groups' status as an indispensable partner.

Working with stewardship groups also expands the Forest Service's spatial and financial "reach". It affords access to restoration funding not otherwise available to the Forest Service, such as through state funds channeled to watershed councils who then collaborate with the Forest Service on restoration projects or via stewardship contracting. Eligibility for stewardship contracting requires an established relationship with a local collaborative group. Working with collaborative partners can also expand the agency's spatial reach, for example through taking advantage of an authority that allows USFS funds to be spent on non-federal lands if doing so benefits federal forestlands. Stewardship groups not only make recommendations to the Forest Service about how to use stewardship funds, but are directly involved in the implementation and monitoring of the funded restoration projects. Frequently, non-agency actors are able to complete these tasks at lower cost than can a government agency. Hence, the Siuslaw's collaborative relationships with external stakeholders are described as an essential tool for reaching the forest's restoration objectives, by serving as a mediator between the agency and the public, enabling access to restoration funding, and providing implementation and monitoring capacity.

Notwithstanding these benefits, USFS interviewees also reported being constrained in their management choices by their collaborative relationships. The consensus-driven management is celebrated as a hallmark of the Siuslaw's reputation as a collaborative forest and the foundation for trusting relationships among diverse stakeholders. At the same time, it is seen by many as a barrier to being able to implement the management activities they feel are most needed. Interviewees from both within and outside the Forest Service argued that striving for consensus—or avoiding vetos—results in lower-intensity management on smaller scales than would be desirable from an ecological perspective. "*What we're doing is basically internally and externally what our partners are comfortable with. It's almost a capacity issue for them [partners] on their side too. You can't do too much because then they're never going to get involved because they're overwhelmed*" (USFS staff).

Several interviewees – primarily scientists and Forest Service personnel at all levels, but also one member of a stewardship group – argued that in order to achieve large-scale restoration goals and build resilience in a changing climate, thinning operations – even within an LSR – should occur at greater intensity and larger scale. As one ranger put it: "*It would be great to just go out and manage the landscape around here like we [Forest Service managers] think it ought to be managed from a professional standpoint. […] But the reality is that this is public land and so how we manage is based on people's values. And so we're really managing based on values, but values is not necessarily what's always best for the landscape"* (USFS). Despite questions about management effectiveness, this status quo is maintained because it is seen by managers as the best pathway forward within a complex social and political environment: "*What I would say is that almost assuredly what we are doing right now in this compromise management is not absolutely optimizing forest management out there. […] But what I would say is that in general, I can't think of a better method right now. I think that's the bottom line, is that all of us feel that this is about as good as it could possibly work. It is working [here] and on many forests it isn't working.*"

Most interviewees argued that the reason the status quo is maintained is that it affords at least some benefit to all those involved: some economic support for local communities through stewardship contracting, funding for restoration projects and a voice for conservation organizations and other stakeholders in where and how to conduct them, and even a fairly high level of timber production—all on a forest that was not expected to produce any timber under the NWFP. The latter is considered the main reason why the timber industry exerts no significant pressure to increase timber production on the Siuslaw. Finally, the status quo also includes the personal benefit of working in an environment not characterized by persistent conflict, a recurring theme in all interviews. *"A lot of people are saying, 'This is just a better life. This is a good job because you don't have that conflict; that constant conflict.' And I think that drives the maintenance of status quo."*

Others see the maintenance of the status quo as a result of a certain level of mistrust towards the Forest Service by conservation organizations and stakeholder groups, and, likewise, a fear within the Forest Service of litigation by conservation groups. One USFS interviewee stated that the fear of litigation prevents the agency from pursuing management objectives that partners might oppose: "*When we're doing the environmental assessment process, nobody ever says 'what do you think the timber companies think about this', it's always 'what do you think the environmental groups would say to that…because they sue the Forest Service.*'" A statement by an interviewee representing a stakeholder group confirms the strong influence on Forest Service decisions: "*The groups make recommendations. And so the Forest wants to continue to move forward in the good graces of the groups. They don't want to step on the groups*." These statements suggest that the relative success of "social forestry" on the Siuslaw reflects the forest's decision to operate within a relatively constrained decision space that represents the area of agreement among various veto-players, most importantly environmental advocates.

Several interviewees, both from within and outside the Forest Service, viewed the Siuslaw's future with some uncertainty. So far, thinning operations have aimed to speed up the development of old-growth conditions in stands less than 80 years of age that had been clear-cut and densely restocked. Most estimated that all of these stands will have been treated by the year 2035. Skeptics argued that this will ultimately test the degree to which relationships and trust built between agency and non-agency actors involved will afford the forest the social license to continue active management in older stands once plantation thinning opportunities are exhausted.

4.2. Willamette national forest

> "*So the Willamette, it's called the mighty Willamette, even now I think the Willamette produces the second largest timber harvest of any forest in the country. For decades and decades the Willamette was number one… some of the core values or the foundation of the forest [is], this forest got the cut out…well the Willamette has still kind of gone down this road, being the mighty Willamette, largest budget, biggest timber harvest, that's kind of how it was set up*."

Interviewees frequently described the Willamette as "*ground zero*" of the timber war era: "*It was like a nuclear—people were spit on; buildings were burned down; there were protests."* Unlike the Siuslaw, the Willamette under the NWFP includes both reserve designations and substantial 'matrix' land, which is intended for timber production and includes some old growth stands. Overall, the amount harvested (approximately 70 million bf annually) has remained far below what was expected based on the NWFP, largely as a result of litigation.

Interviewees gave varying explanations for why controversy on the Willamette has continued. Many felt that contextual factors, such as the forest's matrix designation, as well as its history and reputation as a major timber producer, were partly to blame for the continued controversy surrounding its management. Several USFS employees argued that the Willamette was being blamed for clear-cuts on private land surrounding the national forest, contributing to a poor reputation. Interviewees also attributed the controversy to the forest's proximity to urban areas with strong recreation and conservation interests, greater media coverage of any controversy surrounding forest management, and a widespread opposition to timber harvest, as well as industry and some rural communities demanding more timber production. "*All of your forest products industry is here in the Willamette Valley. Very strong advocacy for a long time. It's about timber on the Willamette. It always has*

been about timber […] *And then the environmental groups—this is their epicenter as well. This is [name of conservation organization]'s home. This is some of the biggest, baddest environmental groups you are ever going to want to meet, with a lot of moxie and money, are located in between Portland and Eugene. So it's a little harder here to strike that balance. So the Forest Service is sometimes the one in the middle striking that balance*".

A second, related, reason for the continued controversy was seen in the Forest Service's inability to manage these competing demands on account of societal actors' influence on Forest Service decisions. Limitations placed on the agency by veto players were perceived to override the management direction within the NWFP itself: "*I mean, the NWFP, at this point you could drive a truck through it—it's permissive. And we are operating on a narrow band of reality from the NWFP […] because we don't have social license to do the rest of it. Social license is more limiting than the NWFP at this point, by a lot!*' Similarly, one interviewee stated: "*There is the ability to be right scientifically, but, in this part of the world, that's not that easy to do. Even if it's scientifically correct, it's still a social question. I don't think science drives […] I think, there is the science behind restoration, but the reason that restoration is okay is because of the social.*'

Interviewees from all backgrounds described a trend on the Willamette over the course of the previous five to ten years towards greater engagement with the public and external actors regarding management decisions. Several explained that part of their motivation to reach out was to gain local support for management decisions and thus reduce conflict. In addition to utilizing the standard public comment processes, several districts were working closely with local stakeholder groups. For example, one group focused on developing economic opportunities for rural communities, and another on water quality issues. The districts also worked closely with watershed councils, which are non-regulatory multi-stakeholder volunteer bodies; one district collaborated closely with a stakeholder group made up of a local water utility company, state regulatory agencies, the timber industry and more. Efforts to develop stewardship contracting projects were ongoing at the time this research was conducted. Overall, collaborative relationships were less well developed compared to the Siuslaw. Nevertheless, interviewees described a number of benefits of their engagement with outside actors, whether through official comment processes or by sitting on boards of watershed councils and other multi-stakeholder groups. For example, it was described as a way for rangers to understand what a socially acceptable management solution would be. 'Social acceptability' was typically defined as the absence of legal challenges by environmental advocates. *'Whether an environmental group would decide to sue us would be based upon how far out there on the limb I'm stepping, you know? So my job is to know, I think, where that edge is.*' (USFS)

Yet given the diversity of demands and interests, rangers did not feel that their decisions could truly meet the interests of any one group or individual internally or externally. They often described the goal as finding a minimally acceptable solution: "*I feel like I have made a good decision when everyone is equally upset at me. […] That exemplifies that mindset that everyone has had to give up something so they are a little upset about the decision."* The result, as on the Siuslaw, has been forest management focused on restoration thinning in stands younger than 80 years old as well as aquatic restoration. A second important benefit of working with external partners was gaining access to a facilitator for public meetings. Watershed councils, for example, were frequently contracted to facilitate meetings for the USFS. Unlike the federal agency, a non-profit organization can exclude individuals from meetings who are fundamentally opposed to working with the Forest Service. Their role was described as providing a forum for discussion and providing information to the agency: "*They [watershed councils] bring all those people together, and they provide the forum and sometimes facilitate the forum for that discussion to happen. And then the information goes back [to the USFS]."* Furthermore, non-profit organizations are able to access funding sources not available to the USFS, and the agency can provide expertise on a variety of issues. Thus, working together can be essential for all organizations involved to reach their objectives.

Nevertheless, several district rangers reported difficulties mobilizing potential partners despite multiple efforts to get collaborative groups started and invitations to contribute to the development of management proposals. While some simply reported no interest among potential partners or the general public, others described active and outspoken opposition towards collaborative efforts by particular interests. Several accused conservation organizations of practicing non-engagement in collaboration as a deliberate strategy: "*The environmental groups actually get money from people donated to them to fight the clear-cuts even though those don't happen anymore, so they have to keep painting that picture to get the money into their groups.*" At the same time, several non-USFS actors, including some with a long history of involvement with the Willamette, questioned the sincerity of some of the districts' offers to collaborate. They perceived the Forest Service's objective to be to generate "*buy-in*" to a decision already made internally, rather than developing ideas and objectives together with outside partners.

Others attributed the continued controversy to the Forest Service's internal structure and the NWFP itself, specifically the districts' dependence on timber production as a source of funding. Most interviewees—including representatives of conservation organizations—acknowledged that forest management on the Willamette had become more holistic and considering of non-timber objectives over the previous decade. However, because district funding continues to be tied to timber production, timber targets were still widely perceived by external partners to be the major driver of management decisions. The agency's funding structure was also seen by some USFS managers as a barrier to meeting non-timber objectives: *"Because we are given targets, 'You will meet these targets, but then you're supposed to be doing restoration.' What does that mean? And there are some things […] that you can accomplish restoration through vegetative management and get timber targets, but it's not going to get you exactly where you want to be."* Another USFS employee added that wildlife or restoration projects are often dropped due to a lack of funding for necessary components such as surveying, while the timber program is able to proceed because of its ability to generate income: "*The bottom line is: I don't have a lot of money to do wildlife projects. […] but the timber program's always going to happen. There's a lot of money backing it. That's what funds a lot of my time, 85% of my time is timber. So I sometimes feel like I really work for the timber staff, I don't work for the natural resources staff. […] Not that he [the silviculturist] evaluates my performance, but he controls the money that pays me*." In some cases, Forest Service interviewees described timber targets as standing in direct conflict with non-timber objectives: "*You've got a piece of ground that's matrix and by definition is meant for timber production. That same piece of ground is northern spotted owl habitat, which by law we need to protect. […] Where's the middle ground? […] How do you work your way through that without getting litigated by one side or the other or both? Both generally.*" Unlike Siuslaw staff, employees on the Willamette described significant pressure to reach timber targets, and being approached regularly by timber industry interests to produce timber volume given the large amount of land on the Willamette designated as matrix under the NWFP.

As one Forest Service interviewee observed, the pressure to meet timber targets was closely linked to the fear of litigation, and thus to external influence: "*The Willamette's timber target is around 70 million [board feet]. 70–80 million. We're the second largest timber target in the country, […] we are a big part of that for region 6. […] We have to meet our target. If we don't meet our target, we won't get the budget that we get now, and we will have to lay off people. It's that direct. So, we can put controversial things in our proposals, but if it comes down to the decision: do I push this controversial thing or just concede, give it up? Always the [stands] over 80 [years]… regeneration, meadow creation, where you have to clear-cut something […] We take that out of the decision so that we can meet our target. That is really the bottom line for us. That drives everything*". Adding to the pressure of adjusting proposals to avoid litigation are the extensive planning and analysis processes involved in preparing any

management activity, in combination with a fairly simple objection process allowing outside actors to challenge agency decisions. For USFS managers, risking litigation means jeopardizing a significant investment of time and resources.

Forest Service representatives, and scientists in particular, raised questions about the resulting management effectiveness. Critics argued that current management focused too much on individual old-growth species like the spotted owl, ignoring early seral-dependent species[2] and larger landscape-scale dynamics, ultimately interfering with building resilience to future changes that will come with a changing climate: "*The focus on Spotted Owl may prevent us from saving the Sugar Pine, because to do that, you have to make some bigger openings, in an area which is called 'critical habitat' for Spotted Owl. And so, which is more important? Saving a tree species that we may need in the future? Saving Spotted Owl? Those kinds of conflicts occur all the time. And so, to me, restoration is focusing on the whole picture, not on one piece and forgetting about the others.*" The neglect of early seral species was largely attributed to the influence of conservation organizations: *"We focus far too greatly on dealing with a few very highly touted, very recognizable species and use them as the bellwether for say, old growth systems, but yet the NWFP also outlined there was 160 some species that are early seral dependent, and so those species are dependent upon early seral forest conditions, that we purposefully aren't managing for those because early seral, for whatever reason in the public's eye, at least some small groups of the public, isn't looked upon favorably."*

A particular point of conflict was the issue of conducting management in stands over 80 years old; the 80-year limit is a flexible standard in the NWFP that has been enforced more strictly by conservation advocates. Many in the agency argued that this approach is arbitrary, counterproductive and prevented ecologically necessary treatments: "*We have, what we call, fire regenerated forest that comes back very thick naturally. Regardless of that 80 years old, or whatever age it is. It is an absolute dense, dark forest, with no light coming into it. So it acts like one of those young stands on the Siuslaw that they are thinning and they are doing work on.*" Yet from the perspective of conservation representatives, seemingly arbitrary rules such as an 80-year cut-off for thinning projects were necessary to ensure that the combined pressures of timber targets and industry influence did not take precedence over ecological criteria. As one interviewee put it "*There are always ongoing pushes to return us to clear-cutting older forests. There is still the timber industry— a small portion of it—that requires large diameter logs to feed their mills. And a lot of forest management on federal lands is really at the whim of what administration is in place in Washington, DC. […] the old growth forests out here don't have statutory protection […] some of them are protected under administrative layers that could go away under another Bush regime or whoever may take office next.*"

Despite different viewpoints about current management and widespread dissatisfaction with the status quo among interviewees, most did not expect change to be forthcoming. "*So my perspective is that, I think a lot of people are unhappy with the NWFP. But I think a lot of people are also afraid of changing anything—losing anything of what they have.*" Some argued that as long as the Forest Service funding structure is based on timber production rather than restoration, and as long as districts are expected to pursue conflicting objectives, the conflict will continue. Others argued that conflict will continue because the disagreements are based on "*deeply ingrained values*" and because conflict was seen by some as serving strategic needs of conservation organizations. Many also pointed to the neglect of early seral habitat and species in the conservation organizations' restoration agenda as an indication of strategic behavior. Similarly, one Forest Service employee pointed out that much of the management on the Willamette is very similar to that on the Siuslaw, but subject to much more scrutiny and litigation by conservation organization. Several interviewees argued that the strategic engagement of conservation organizations has resulted in greater difficulties generating social license on the Willamette than on the Siuslaw.

5. Discussion

At first sight, it would seem that the Siuslaw and Willamette National Forests could not be more different. The Siuslaw has come to be known for its collaborative and restoration-oriented management and the Willamette continues to struggle with conflict and litigation surrounding its management decisions. The dynamics on the two forests are well expressed in two statements by rangers from each forest on what successful management looks like: on the Siuslaw it was characterized as: "*If nobody complains then you must be doing things alright. If people feel included then it's successful*"; conversely, on the Willamette: "*I feel like I have made a good decision when everyone is equally upset at me. […] That exemplifies that mindset that everyone has had to give up something so they are a little upset about the decision.*"

It could be argued that the Siuslaw has been more successful at adapting to contemporary societal and institutional conditions than the Willamette, as measured by the criteria of low levels of conflict and an ability to exceed expected levels of timber production. The Siuslaw has been able to strike a balance between conservation and timber objectives that affords many stakeholders relative satisfaction and contributes to collaborative management free of litigation. The Siuslaw is thus frequently discussed as a "model" forest. Nevertheless, our results point to a number of constraints on management decisions: despite the preponderance of reserve designation, which limits management to plantation thinning, the Siuslaw depends on its self-set timber targets as an essential funding source. Without this income, its restoration program would not be possible. Furthermore, our data indicate that relationships with outside actors, while essential to the forests' success, also constrain management decisions. Interviewees report that consensus solutions override what Forest Service staff and scientists view as optimal from a restoration perspective. This demonstrates the strong position external actors have in the decision-making process. The fact that the Siuslaw is subject to such constraints is particularly telling as this forest is already largely constrained in its management choices due to the designation of the bulk of the forest as LSR. Thus, the resulting management approach and its adaptability to long-term challenges call into question the long-term sustainability of the Siuslaw model.

The Willamette has continued to face conflict and litigation surrounding its management. The interview excerpt above regarding a 'good decision' being one which causes all sides to be equally upset is remarkably similar to the mindset expressed by Forest Service personnel in the 1970s (Kaufman, 2006). The Willamette has been slower to transition to collaborative and restoration-oriented forestry, and has less well-developed partnerships. Most pointed to the forest's history as a major timber producer, clear-cuts on surrounding private land, and a legacy of distrust as drivers of conflict. Interestingly, being surrounded by private timberland was considered to contribute to a poor public perception of the forest, while on the Siuslaw, the same situation was considered beneficial because it provided necessary infrastructure for the forest's operations.

Overall, our study points to institutional legacies of prior USFS management paradigms intersecting with the influence of external actors as the source of much of this controversy. Primarily, this relates to the timber-based funding mechanism and associated lack of available resources for non-timber management objectives, as well as conflicts between these timber-oriented "legacy institutions" and more contemporary policy direction emphasizing restoration and conservation within a broadly neoliberal context in which funding for core management activities has diminished (see also Cashore and Howlett, 2007; Larsen, 2014; Moseley and Winkel, 2013; Winkel, 2014). This situation leaves managers caught in the paradox of being asked to achieve objectives that are not well funded, and thus require the collaboration of

[2] Early seral refers to early stages of succession processes.

external actors. These actors, however, do not always approve the Forest Service's objectives (or may have strategic interests not to do so), and maintain their position as veto players (see also Charnley et al., 2015). External actors, in particular conservation organizations, are afforded veto-player status not only by the larger political system (Fukuyama, 2014), but also by policies specific to the Forest Service as an agency (Nie and Metcalf, 2015). The multiple veto points within the Forest Service institutional structure, combined with its extensive rational planning requirements and its multiple layers of conflicting institutional direction, provide ample opportunities for external actors to challenge decisions on both procedural and substantive grounds.

We find that within the described setting, district-level management decision-making on both the Siuslaw and the Willamette should be understood as a process of navigating top-down constraints associated with the institutional legacy of the agency while also negotiating an operational space within the bottom-up influence of veto-players. This compels forest rangers to focus on management options that they can realistically implement and that help to meet budgetary goals or performance metrics, rather than basing their decisions primarily on ideal management as perceived by agency silviculturists and some non-agency scientists (see also Haugo et al., 2015). While less pronounced on the Siuslaw, fear of administrative challenges or litigation was identified as an important influence on management decisions on both of the national forests studied. Fear of repercussions among local stakeholders from decisions made has long been recognized as key influence on district level decision-making (Kaufman, 2006; Koontz, 2006; Thomas, 2002). Yet our study points to an important dynamic not discussed in prior scholarship: given that the fear of challenges by veto players is closely tied to a fear of not meeting timber targets and therefore not receiving future funding, the Forest Service's funding mechanism also serves as the backbone of the external stakeholders'—in particular conservation organizations'—influence on Forest Service activities.

Yet, Forest Service managers are not only dependent on non-state actors to approve (i.e., not formally challenge) timber operations, in many cases non-state actors are also relied upon to achieve non-timber management objectives, for example by serving as mediators between the agency and various stakeholders, enabling access to restoration funding, or providing implementation and monitoring capacity. The post-NWFP shift toward neoliberal mechanisms to meet non-timber, non-fire management objectives (McCarthy, 2005) has thus strengthened the veto-players' status. As a result, local, non-agency actors are increasingly taking on functions previously assigned to state or federal entities, as discussed by Abrams et al. (2015). Examples of this process of neoliberalization include the overall decline in congressional appropriations for core forest management functions, the consequent development of new competitive sources of forest management finance and the extensive use of public-private partnerships for Forest Service planning and implementation. Forests unable to attract external actors as collaborative partners may thus become caught in a vicious circle of not being able to access funding and capacity to expand restoration activities while being scrutinized for their inevitable focus on timber production. Our study therefore clearly does not support the notion of the Forest Service or its local level managers as being relatively autonomous decision-makers, as is sometimes implied in contemporary scholarship. Nor did we find evidence that local collaborative initiatives merely implement decisions made by higher-level actors (Selfa and Endter-Wada, 2008). Instead, our work suggests that, at least in some geographies, the once-autonomous USFS is increasingly a "networked" (Howlett and Ramesh, 2014) organization dependent upon relationships with various private and civil society actors for its operation (Abrams et al., 2015; Cashore and Howlett, 2007; Moseley and Winkel, 2013; Winkel, 2014) (see also Fig. 2).

Our results indicate that, despite obvious differences between the Siuslaw and the Willamette, both forests have found a kind of functional equilibrium, which interviewees expected to remain quite stable over the near-term. This can be interpreted as a means of "muddling through" Fukuyama's vetocracy: various veto-players influence the Forest Service to reach their objectives, yet none stops the agency or forest management completely because everybody has something to lose. These 'local equilibriums' are thus similar to the national-level 'thermostatic equilibriums' identified by Cashore and Howlett (2007). These local equilibriums could be viewed as the result of inappropriate influence of non-government actors and a barrier to policy implementation. Yet given the mismatch between official policy objectives and an institutional regime that continues to incentivize timber production, veto-players can also be understood as an important counterweight that facilitates achievement of other, equally legitimate, policy objectives.

In either case, our findings raise questions about the ability of the social forestry regime to address forest management issues that warrant large scale, concerted actions, such as wildfire, insect outbreaks or climate change adaptation (see also Abrams et al., 2017b; Charnley et al., 2015). While the process of "muddling through" may function well at limited spatial and temporal scales, its current permutation may be less adept at addressing larger scale management needs. It should be noted, however, that many places across the U.S. West have been able to "scale up" social forestry to higher spatial and temporal scales, for example through the Collaborative Forest Landscape Restoration Program (Schultz et al., 2012). Prior research has also identified cases where leadership by local place-based organizations has helped to catalyze a relatively comprehensive, long-term vision that attempts to reconcile forest restoration needs with community economic opportunities (Abrams et al., 2017a, 2015). This suggests that one pathway out of the pitfalls of social forestry may be, paradoxically, the development of stronger civil society capacity and leadership that encourages local veto-players to think and plan at higher spatial and temporal scales and to consider a more holistic set of social and economic imperatives.

6. Conclusion

National forest management in the US Pacific Northwest has been the subject of much controversy for several decades. Top-down mandates as well as bottom-up initiatives have shaped the current regime, which is characterized by great complexity and high levels of interaction between agency and non-agency players. We set out to understand what the current social forestry paradigm means for national forest management decision-making at the local level. Our study suggests that forest management takes place in a vetocratic and increasingly neoliberal setting, and continues to be shaped by legacies of past management regimes.

It is clear that the social forestry regime implies a much-expanded role for non-Forest Service stakeholders: as conveners, as communicators, as deal-makers, and—for those performing a veto-player role—as regulators of the boundaries on management possibilities. The Forest Service is dependent upon these non-agency stakeholders (1) to not litigate management decisions, and (2) for access to financial resources and the capacity needed to reach restoration objectives. This dependence results in part from the agency's funding structure, which continues to be tied to timber harvest, even though management objectives have diversified. Additional funding for the agency's non-timber (and non-fire) objectives is generally tied to connections to collaborative, external partners, such as stewardship groups, other collaborative groups, or watershed councils. Beyond helping to identify pathways through the maze of various veto players, these relationships may also provide the personnel capacity needed to plan and implement projects. The current social forestry regime thus appears to be an example of network governance, making the USFS less autonomous than the agency famously described by Kaufman in 1960. Furthermore, it is an agency increasingly grappling with gaps in funding and capacity, further reinforcing its dependence upon networks of non-state actors. Street-level forest managers, thus, operate within a decision space

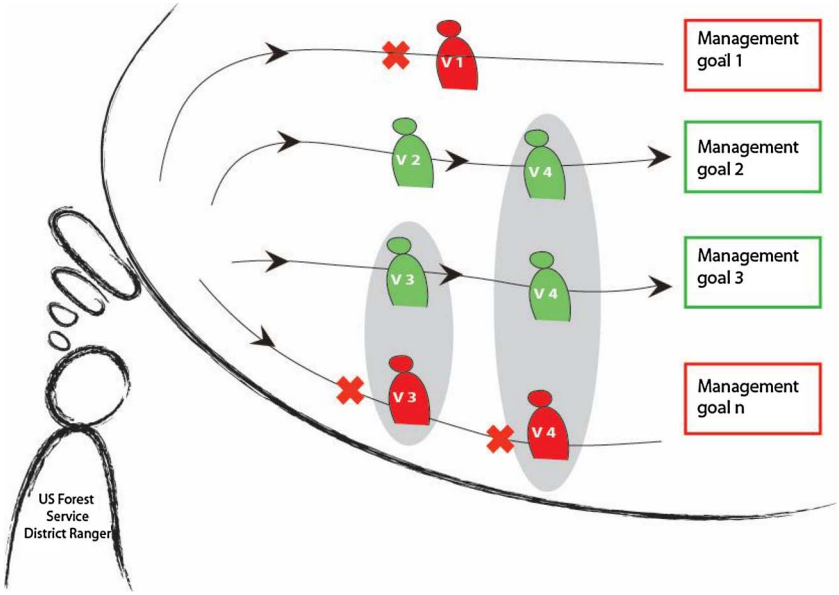

Fig. 2. Forest Service decision-making and veto-player (V) influence; **X** represents use of veto power; ➤ represent contribution of resources (capacity, legitimacy, etc.). The graphic illustrates that some veto-players only serve to block potential projects (V 1); some serve only to facilitate (V 2); and others do some combination of blocking and facilitating (V 3 and 4). In this scenario, management goals 2 and 3 are achieved due to a combination of facilitation and lack of blocking by veto players and other external actors.

constrained by both capacity and legitimacy, and frequently search for ways to fill these gaps while simultaneously meeting their statutory mandates and timber targets.

This study points to the need to think beyond the current manifestation of social forestry (largely centered on local-scale actors and concerns) to consider ways to address management needs over larger scales and longer time periods and inform local-scale decision-making. Issues such as climate change, associated patterns of fire and insect activity, and others will require governance processes beyond the local scale. Policy changes that eliminate or reduce the influence of timber targets, provide long-term funding for projects with both ecological and social merit, and engage veto players in collaborative learning and information-sharing would seem to hold promise in this regard. Given that many USFS units around the country have indeed moved to planning over longer time frames and larger spatial extents, the dynamics we observed on the Siuslaw and Willamette may be characteristic of a particular set of circumstances—in other words, their "equilibriums" may be more limited than those of forests with different sets of economic, ecological, and political variables.

This study, then, suggests important patterns in the evolving relationships between the USFS and the public it serves. The "complex, hybrid system" described by Moseley and Winkel (2013) results from the intersections between longstanding institutional legacies, ongoing limitations in operational funding, and the variable influences of non-agency actors in particular geographies. These civil society actors increasingly contribute both legitimacy and capacity to the agency, while also placing boundaries on managerial options, within a highly networked system of forest governance. The findings presented here raise numerous questions regarding the temporal evolution of these networks over time, their variability across space, and the potential of various actual or possible policy revisions to alter prevailing dynamics. They also point toward potential challenges to long-term maintenance of existing equilibriums, suggesting the need for adaptive and collaborative processes of learning and the development of civil society leadership capacity in order to face looming threats to forest sustainability.

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