

Characterizing Community Forests in the United States

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Abstract

Research on community forests (CFs), primarily governed and managed by local forest users in the United States, is limited, despite their growth in numbers over the past decade. We conducted a survey to inventory CFs in the United States and better understand their ownership and governance structures, management objectives, benefits, and financing. The ninety-eight CFs in our inventory are on private, public, and tribal lands. They had various ways of soliciting input from, or sharing decision-making authority with, local groups, organizations, and citizens. Recreation and environmental services were the most important management goals, but timber production occurred on more than two-thirds of CFs, contributing to income on many CFs, along with a diversity of other income sources to fund operations. We discuss the difficulties in creating a comprehensive CF inventory and typology given the diversity of models that exist, reflecting local social and environmental conditions and the bottom-up nature of community forestry in the United States.

Study Implications: Despite their small footprint in the United States, community forests are a rapidly developing model of forest ownership, governance, and management that helps protect forestlands and open space and demonstrates how market and nonmarket forest goods and services can be produced for broad and enduring community benefits. This study inventories and characterizes community forests in the United States to increase understanding of this model, its prevalence, and its potential. It provides a baseline of information that serves as a foundation for further exploration and research on the impacts and contributions of community forests.

Keywords: Participatory governance, environmental services, community benefits, local development, timber management

Over the past few decades, many countries have increasingly promoted community forests (CFs) as a way to conserve forests, enhance rural livelihoods, and recognize the traditional and customary rights of local forest users to access, use, and manage forests (Hajjar et al. 2021; Lund et al. 2018). CFs are delineated forest areas where community members have access to natural resources, are engaged in their governance, and receive indirect and direct benefits from their management (Charnley and Poe 2007; McDermott and Schreckenberg 2009). Although CFs have existed in many forms across the globe for centuries, these more recent efforts are typically formal, government-sanctioned, and often government-sponsored. A total 14% of the world's forests, and 28% of forests in low- and middle-income countries, are currently owned or managed by Indigenous peoples and local communities (Rights and Resources Initiative 2018). Internationally, CF initiatives span a broad range of tenure regimes, institutional arrangements, relationships between communities and

higher levels of government, activities, and outcomes that have evolved in line with local contexts, conditions, needs, and goals (Charnley and Poe 2007; Hajjar and Molnar 2016).

In the United States, CFs have also existed in diverse forms for centuries (Baker and Kusel 2003; McCullough 1995), although as elsewhere, formally designated community forests have been increasing in number since the 1990s. This relatively recent trend is likely driven by several factors. First, vertically integrated forest products companies nationwide have been divesting of their industrial timberlands since the late 1980s for economic reasons (Zhang 2021), causing a large-scale shift in timberland ownership from industrial to institutional investors (Zhang 2021). To prevent residential development, maintain access to local forests, conserve forest resources, and keep working forests working to provide economic opportunities for local residents, initiatives to acquire industrial timberland and manage it as CFs have proliferated (Belsky 2008). Second, private family forest owners are aging;

Received: August 30, 2023. Accepted: November 30, 2023.

Published by Oxford University Press on behalf of the Society of American Foresters 2024. This work is written by (a) US Government employee(s) and is in the public domain in the US.

the average age of the primary decision-maker over family forestlands is 65 and, for about 20% of these ownerships, 75 or older (Butler et al. 2021). Keeping their family forestland intact for future generations is a top concern for family forest owners (Butler et al. 2021). If their descendants are uninterested or unable to keep this land in the family, community groups or municipalities may wish to acquire it as a CF to prevent its subdivision and fragmentation and provide community benefits.

Third, Indigenous peoples in the United States have regained greater control over ancestral lands, including forestlands, both on and off tribal trust lands over the past several decades (McGinley et al. 2022). Some tribes have acquired forestland through fee simple purchase, including with funding designated for CF creation, and established CFs on those lands (McGinley et al. 2022). Fourth, the 1990s saw a dramatic increase in citizen participation in decision-making about the management of public forestlands (Baker and Kusel 2003; Charnley and Poe 2007). This trend has persisted, with community-based organizations, community members, forest collaborative groups, and other stakeholders playing a greater role in management decision-making and collaborative forest stewardship on federal lands (Davis et al. 2020). In some cases, these arrangements may exhibit the characteristics of a CF.

Simultaneously, several programs providing funding for land acquisition to create CFs have arisen in the past two decades (McGinley et al. 2022). Access to funding along with the emergence of supportive policies, organizations providing technical assistance, and practitioner networks have fostered a more favorable environment for CF creation since the 2000s (Frey et al. forthcoming). These trends have played out somewhat differently in different locations, but together they have contributed to a nationwide rise in CFs in the United States.

Unlike many other countries around the world with communal property systems, CFs in the United States do not exist as a distinct land tenure or ownership class. CFs have been established on a variety of public, private, and tribal lands and have diverse land tenure arrangements (McGinley et al. 2022). Furthermore, there is no universally accepted definition of a CF in the United States (Frey et al. forthcoming). These two facts make studying CFs in the United States, as a distinct form of forest tenure, management, and governance, challenging. Literature on US CFs, most of it published since the 1990s, has primarily been descriptive in nature, relying on limited numbers of case studies to elaborate on the various motivations for creating CFs and the institutional and political context that pushed them forward (Belsky 2015; McCarthy 2006); development of mechanisms and institutional arrangements for governance (Abrams 2023; Abrams et al. 2015; Belsky and Barton 2018); and their potential benefits (Christoffersen et al. 2008; Lyman et al. 2014). Belsky (2008) proposed a typology of CFs defined by who owns the CF—Indigenous groups, towns or municipalities, or community-based conservation organizations. A key message of the scientific literature is that a vast diversity of CFs exists in the United States, reflecting the diverse social, economic, and ecological contexts in which they occur.

To our knowledge, no prior research has attempted to document or characterize the full suite of CFs in the United States. Thus, the goals of this paper are to (1) identify, inventory, and characterize CFs in the United States; (2) enhance understanding of their ownership and governance structures,

management objectives, and sources of income; (3) extend the discussion of the variability in forms of CFs and build on previous work to refine a CF typology; and (4) problematize how we recognize CFs in the United States (i.e., what is included, what is not, and why).

Methods

Defining CFs¹

A common but broad premise of CFs internationally is that place-based communities have some role in determining how local forests are to be managed for community benefit (Hajjar et al. 2021). In the United States, communities associated with CFs are frequently not only place-based but also communities of interest and practice or some combination of these (McGinley et al. 2022), complicating the notion of “community” and “local” (see Brosius et al. [2005] for a discussion). For purposes of deciding what to include in this study, we considered the following attributes of CFs, which are prevalent in the literature on US CFs (see Frey et al. forthcoming): (1) ownership or tenure by a local governmental or nongovernmental organization (NGO) on behalf of the community; (2) communities are substantively involved in forest management and governance; (3) communities have secure rights to access and benefit from the forest; (4) social and economic benefits for local communities are a management priority; and (5) forest conservation values are permanently protected.

Creating a CF Inventory

To catalogue and characterize CFs in the United States, we first undertook an inventory of existing CFs, aiming to be as comprehensive as possible. Given the lack of a consistent definition or model of CFs, we used a hybrid approach to identify them (Frey et al. forthcoming). This meant first searching for entities that self-identify their property or initiative as a CF and for those that have participated in programs or policies related to CFs. Then we overlaid a series of inclusion criteria based on the attributes of CFs outlined above. Therefore, to be included in our study, local communities had to have rights of access and use and some form of management responsibility or decision-making authority (beyond consultation) over local forests. Additionally, these forests were managed to promote ecological sustainability and contribute to conservation while creating tangible local community benefits as a management priority.

We began by compiling a list of CFs and related information from a US Endowment for Forestry and Communities study (Christoffersen et al. 2008) and a previous exploratory project (Hovis et al. 2022). We then added to this list, drawing from CF lists provided by organizations that work with and support them, such as the Ford Foundation, the Northwest Community Forest Coalition, the Northern Forest Center, the Trust for Public Lands, the Open Space Institute, and the USDA Forest Service (Forest Service) Community Forest and Open Space Conservation Program. We also used Google Search Engine to identify any additional CFs not already included in our list. Search terms included: state name AND community forest OR community managed forest OR community-based forest OR town forest. We further consulted with various professionals in our networks involved with CFs (e.g., via the Northwest Community Forest Coalition annual meeting) to ensure the comprehensiveness of our list. Finally, we consulted with

two project advisory committees that we set up at the start of the funded project under which this research was undertaken: one, a research advisory committee consisting of CF professionals across select government agencies, CF coalitions, and networks; the other, a tribal forestry advisory committee consisting of representatives of tribes with CFs and tribal natural resources networks.

We also used Google Search Engine to record any information on the identified CFs, usually landing on the websites of CF owners or their supporters. This information typically included the group name, forest location, acreage, landowner, governance, management objectives, history, URL, and contact information. Searches and consultations took place between 2019 and 2023, with more CFs identified and added continually as we heard of cases that were missed in our searches or that were being newly created. We examine the limitations of this approach in the Discussion section.

We initially located 136 possible CFs in the United States using these methods. Of these, thirty-two clearly did not meet our criteria, and we were unable to find additional information or contacts for eleven. To the remaining ninety-three CFs that met our inclusion criteria and for which we had contact information, we sent an internet-based survey using Qualtrics. We requested that a CF manager or other person familiar with the CF fill out the survey. The survey included questions about the CF, such as size, forest type, ownership, decision-making, who is involved in day-to-day management, management priorities, rules of access and use, and financing. Although most survey questions were designed to capture objective characteristics of the CF (i.e., size, ownership, etc.), we acknowledge that answers to a question asking about “management priorities” may not reflect the diversity of priorities a community may have for its forests. Rather, we expected that a CF manager responding to the survey would choose priorities that were being explicitly managed for, consistent with their management plan or mission statement.

To increase response rates (Dillman et al. 2014), we followed up by sending reminder emails after 2 and 4 weeks and then through phone calls where phone numbers were available. Following this, for all nonresponses or cases where contact information could not be located, we filled out the survey ourselves to the extent possible using CF websites and other available resources. Not all survey questions had responses readily available from website sources, and so these surveys were not as complete. This resulted in some topic areas having smaller sample sizes, as displayed in the Results section. We also followed this protocol for newly identified CFs throughout the time period of the research (either newly created CFs or CFs discovered through our networks that met our criteria), for a combined total of ninety-eight CFs recorded up to April 2023. Survey responses were tabulated in SPSS, where descriptive statistics (frequencies and crosstabs) were used to show patterns across various CF characteristics.

We refer to three regions in discussing our results based on the Forest Service Resources Planning Act Assessment (RPA) regions: the West, combining the Pacific Coast and Rocky Mountain RPA regions, including CFs in Montana, Idaho, Washington, Oregon, California, and Arizona; the North, which includes CFs found in Maine, Vermont, New Hampshire, Massachusetts, New York, Connecticut, Michigan, and Wisconsin; and the South, which includes CFs in Georgia, North and South Carolina, Virginia, and Puerto Rico.

Results

We collected data on ninety-eight CFs across the United States, constituting the sample used for this study (SI Table 1). The survey response rate was 87% (eighty-five of ninety-eight); for the remaining thirteen survey nonresponses, we gathered information from internet sources. We expect the number of CFs to continue to grow in the coming years: after closing the survey in April 2023, we learned of at least four additional initiatives that were close to acquiring CF lands and nine that were seeking funds to purchase CF land. We believe that ninety-eight is close to the current total number of self-identifying CFs in the United States but acknowledge that it is likely an undercount of actual CFs that meet our inclusion criteria. We discuss the difficulties in accurately capturing all US CFs in the Discussion section. Rather than thinking of our sample as a complete inventory of all US CFs, we consider it sufficient for characterizing different types of CFs in the United States.

Location, Year Established, and Size

The greatest number of CFs per state were found in West Coast states (figure 1; Washington, fourteen CFs; Oregon, twelve; California, nine); northeastern states (Maine, twelve CFs; Vermont, nine; New Hampshire, eight); and the upper midwestern states of Michigan and Wisconsin (five each). Fewer were located in southern states, with a handful spread across Georgia, North and South Carolina, and Virginia. The earliest recorded CFs in our sample were created in the 1930s and 1940s (figure 2), mostly city and county forests in the northwestern United States (Montesano Community Forest, Hood River County Forest, Ashland Forestlands, Arcata Community Forest), and two town forests that self-describe as CFs in the Northeast (Gorham Town Forest, Mendon Town Forest). Most CFs in our sample were created after 2010 when there was a sharp increase in the number of CFs in all regions. This time period corresponded with new legislative support for CFs in some states (e.g., Washington State's 2011 Community Forest Trust legislation) and at the federal level (e.g., the Forest Service's 2011 Community Forest Program), which have helped tribes, local governments, and nonprofit organizations acquire land at risk of development to establish CFs.

The total area covered by CFs in our inventory is 436,411 acres (ac). Of this total, 87% of CFs were smaller than 5,000 ac (figure 3), and 63% were less than 1,000 ac. By region, median sizes of CFs were: 1,360 ac in the West, 375 ac in the North, and 334 ac in the South. Nine CFs in the West were 5,000 ac or larger, compared to four in the North and none in the South. The majority of CFs less than 1,000 ac (thirty-nine of sixty-one CFs) were located in the North, with over half of those being between 100 and 500 ac (twenty-five of thirty-nine CFs). A total of 76% of reporting CFs said their forests were located on one contiguous parcel and 24% were on multiple unconnected parcels (varying from two to seventeen parcels).

Ownership, Decision-Making Authority, and Management

As indicated in figure 4, CFs in our sample were primarily owned by either a local government body (town, city, or county government) or by an NGO (e.g., a community-based organization, land trust, or other nonprofit). In the West, CFs

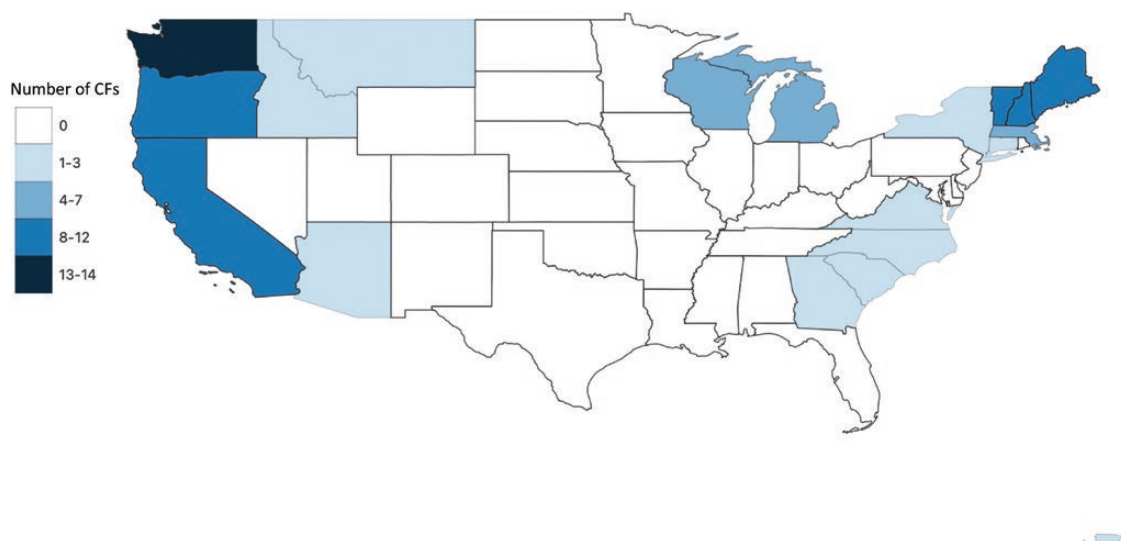


Figure 1 Location of CFs in our database. In this article, we refer to three regions in discussing our results: the West, which includes CFs found in Montana, Idaho, Washington, Oregon, California, and Arizona; the North, which includes Maine, Vermont, New Hampshire, Massachusetts, New York, Connecticut, Michigan, and Wisconsin; and the South, which includes Georgia, North and South Carolina, Virginia, and Puerto Rico.

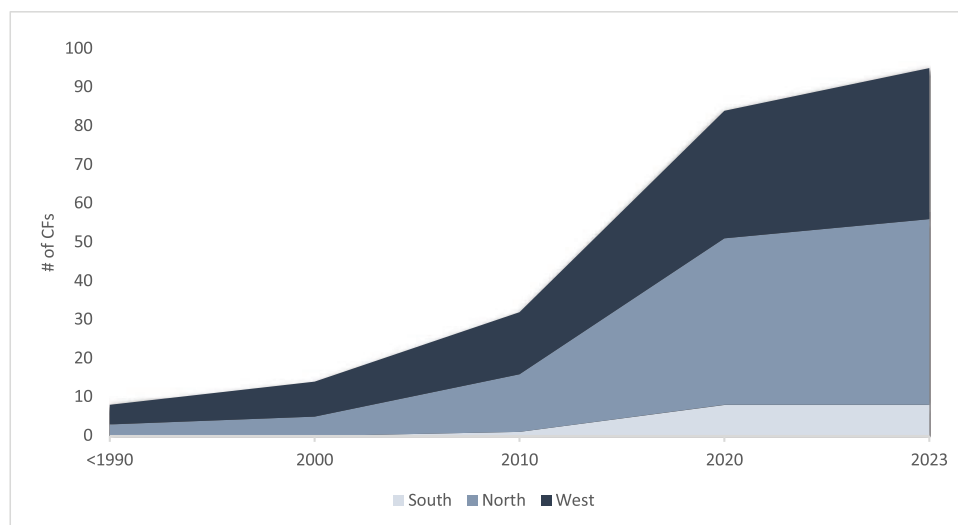


Figure 2 Number of CFs in the United States since 1930.

were mostly purchased from private corporate owners (industrial timber companies, timber investment management organizations [TIMOs], or real estate investment trusts). In the North, CF lands were mostly acquired from private family forest owners. Ownership types included CFs of various sizes, although CFs larger than 1,000 ac tended to be held by a government body, whereas the majority of NGO-held CFs were smaller than 1,000 ac (SI Table 2).

Land ownership largely corresponded with the entity with ultimate decision-making authority over management, access, and use of the CF (SI Figure 1). Government agencies largely had authority over government-owned CFs, tribes over tribally owned CFs, and NGOs over the land they owned. These entities had various ways of soliciting input from, or sharing decision-making authority with, local groups, organizations, and citizens. In some cases, this was institutionalized through formal joint decision-making processes. For example, there were eleven cases of

local government ownership (town, city, or county-owned forests) where decision-making authority was jointly held by both that government body and formal citizen councils or committees established for this purpose. In other cases, although respondents did not describe decision-making as “joint,” they involved community members through mechanisms such as advisory committees and boards made up of local citizens, formal community and public consultation processes (mostly for city or town government ownerships), or various events, regular meetings, and other formal and informal mechanisms that sought community input (mostly for NGO ownerships). Local groups and volunteers contributed to day-to-day management of CFs across most ownerships (SI Figure 2). In particular, various recreation-related volunteer groups helped to maintain trail systems. Otherwise, in many cases, forest consultants or forestry professionals from government agencies or NGOs contributed to forest planning and stewardship.

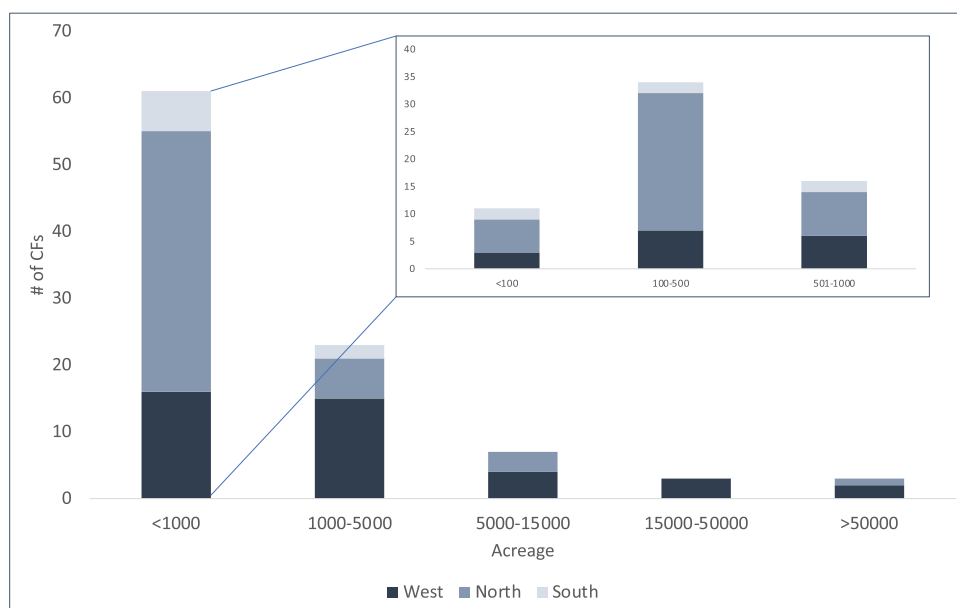


Figure 3 Acreage of CFs across regions.

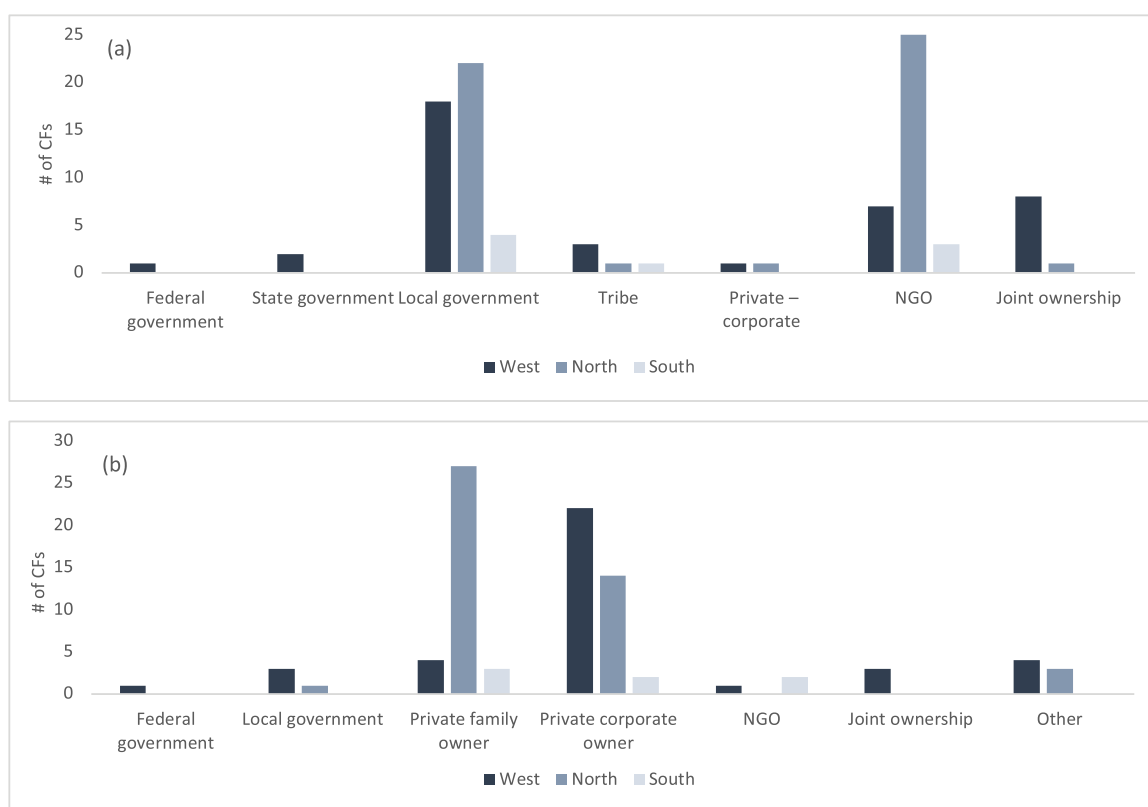


Figure 4 Ownership of CFs: (a) current landowner of forestlands designated as CFs and (b) previous landowners from whom the current landowner acquired the CF land. “Joint ownership” in (a) were parcels jointly owned by a local government body and a land trust ($n = 3$), a private utilities firm ($n = 1$), or a university ($n = 1$); a tribe and a conservancy ($n = 1$); and a land trust and private equity firm ($n = 1$). “Other” in (b) were parcels that were pieced together from multiple ownerships.

Management Goals and Allowed Activities

Survey respondents were asked to select the top four goals, from a list of options, that the CF was managed for (figure 5). Across the country, the vast majority of CFs stated that recreation was a top management goal (82% of ninety-five reporting CFs). Collectively, conservation-oriented goals

(watershed, habitat or open space protection, biodiversity conservation and restoration, and carbon sequestration, totaling 98% of reporting CFs), as well as other nonextractive goals (education, recreation, and cultural heritage protection, totaling 93% of reporting CFs) were much more prominent than extraction-oriented goals (timber production, nontimber

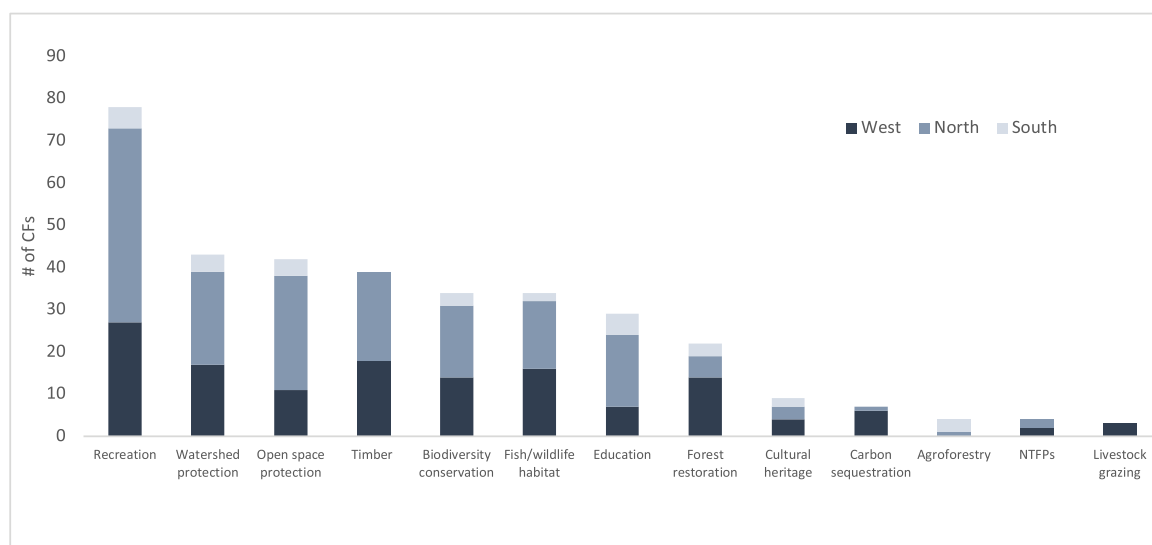


Figure 5 Primary management goals. Respondents were asked to list top four management goals for their CF.

forest products (NTFPs) management, agroforestry, and livestock grazing, totaling 47% of reporting CFs). However, timber production was among the top four management goals reported across the sample as a whole.

There were few strong patterns between ownership type and management goals (SI Table 3). Recreation was listed as one of the top management goals in over 75% of cases across CF ownership types, except for tribal (two of five CFs) and private corporate (one of two) owned CFs. All but two CFs owned by local governments listed a conservation-oriented goal. Half of local government-owned (twenty-two of forty-four CFs) and half of NGO-owned CFs (fifteen of thirty-two CFs) listed an extractive-oriented goal. Of the five tribal-owned CFs in our sample, only one listed an extractive-oriented goal (agroforestry) as a primary management goal and only one indicated that timber was produced but not as a primary goal. Local government and NGO-owned CFs reported slightly more often that producing timber was a primary goal (government: nineteen CFs listed it as a primary goal, twelve as a nonprimary goal, and twelve do not produce timber; NGO: thirteen, ten, and six, respectively).

Although timber production occurred on 70% of reporting CFs (sixty-five of ninety-three reporting CFs; figure 6A), in almost half of those cases (twenty-eight of sixty-five cases) timber production was not one of the top four primary management goals of the CF. Geographically, no CFs in the southern region produced timber as a primary goal. In the North, slightly more CFs produced timber as a primary goal than not as a primary goal (twenty versus sixteen CFs), with only nine reporting no timber production. In the West, seventeen CFs reported producing timber as a primary goal, with ten producing but not primary and ten not producing. Timber production occurred across all acreages (figure 6B), including on almost two-thirds of the smallest CFs in our study (<1,000 ac) and on all CFs larger than 5,000 ac (although not always as a primary goal). Similarly, timber production occurred across all ownership types (figure 6C), whether as a primary goal or not. Of those engaged in timber production, a private consulting forester was used to oversee timber sales in 43% of fifty-one reporting cases, and internal staff from the CF owner in 26% of cases. Across

ownerships, the entity that did the logging was most often a private contracting company (70% of fifty reporting cases). These entities were located at a place within 25 miles of the CF in 52% of forty-two reporting cases, or 26–50 miles in 33% of cases.

Community forests had a variety of rules related to which activities were allowed and whether permits from CF owners were needed if allowed (SI Figure 3). Motorized recreation, camping, and commercial uses of firewood or NTFPs were only allowed in a handful of CFs, often with the requirement of a free or paid permit. Hunting and fishing, in accordance with state regulations, were allowed in more than half of the reporting cases (69% of sixty-five reporting cases and 78% of sixty reporting cases, respectively) and rarely required a permit from CF owners. Personal use of firewood and other NTFPs were allowed in 22% and 40% of sixty-three reporting cases, respectively, although firewood use often required a permit. Altogether, 85% of sixty-six reporting cases allowed some non-timber extractive activities for personal use (either firewood, other NTFPs, hunting, or fishing). Only one CF did not allow recreation and four allowed it only with a free permit. In almost all cases, the same rules applied to the local community as to the general public, except for a few instances where NTFP and firewood use were limited to local community members.

Income Generation and Budgetary Support

A number of CFs across ownerships generated revenue from forest products and services (80% of forty-nine reporting CFs), mostly from timber sales (figure 7; SI Table 4), although two-thirds of those reporting revenue generation stated that timber contributed to less than 30% of their budget. The few instances of revenue from hunting leases and payments for ecosystem services (mainly carbon offsets) were mostly reported in CFs owned by private nonprofits, whereas grazing permits or agriculture revenue were only reported in three state or local government-owned CFs (SI Table 4). Timber revenue was reported across all ownerships where timber harvest occurred, except for the two cases of state government ownership, where it is anticipated in the future, once the forest regains commercial value following harvest by the previous owner.

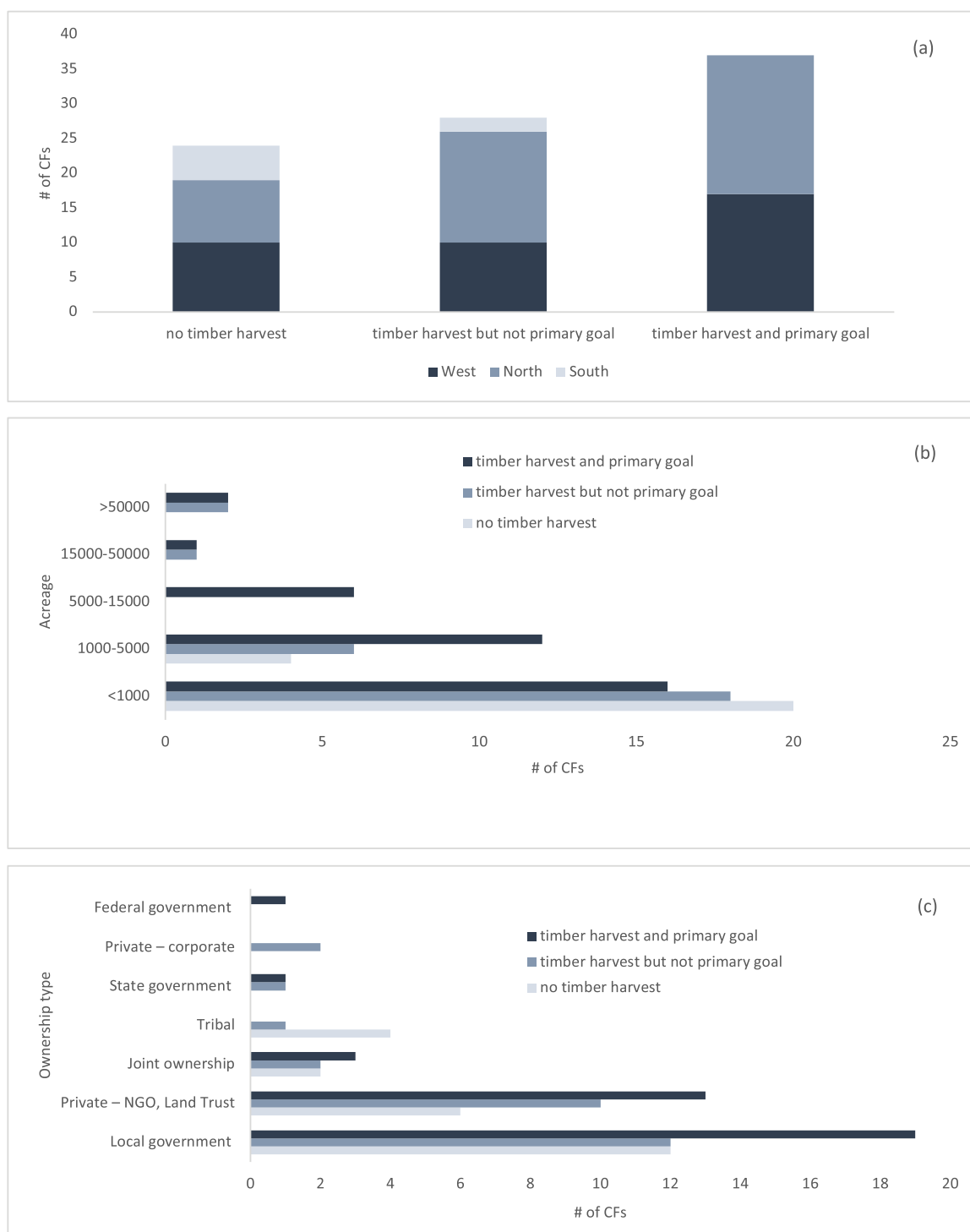


Figure 6 Status of timber production across CFs (a) by region, (b) CF size, and (c) ownership type.

Grants from federal or state governments were the most frequently cited sources of annual budgetary support from 2018 to 2020, the period we asked about (70% of fifty-three reporting CFs; [figure 8](#); [SI Figure 4](#)), although almost two-thirds of those CFs stated that grants contributed to less than 30% of their budget. Unsurprisingly, government-owned CFs more often reported (federal, state, or local) government sources for budgetary support. Local government-owned CFs were more reliant on local government funds: 71% of twenty-four reporting local government

CFs stated they received funding from local governments (50% of them stating that they received more than 60% of their budget from this source), with only a handful of non-government owned CFs reporting support from this source. The NGO-owned CFs reported relying on donations from local community members and fundraiser events much more often than government-owned CFs (in three cases, community donations made up more than 60% of the budget). We did not track sources of funds used for acquiring forestlands in our survey.

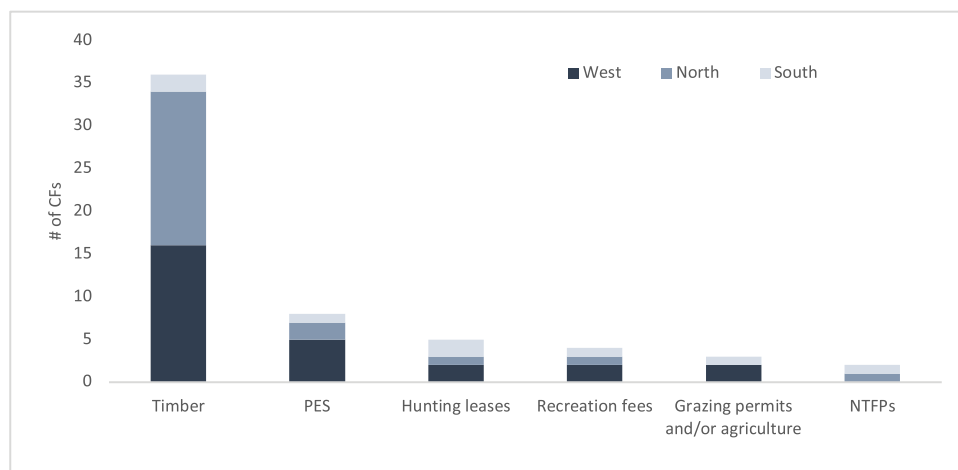


Figure 7 Main sources of revenue generated from forest activities in 48 reporting CFs by region.



Figure 8 Sources of budgetary support 2018–2020 by ownership type. Public ownership includes federal, state, and local governments, and private ownership includes both corporate and nonprofits. Polygons indicate largest differences between private and public ownerships.

Discussion

As the results indicate, there are a variety of ownership and governance forms that CFs currently take in the United States, a variety of benefits that they provide, and a diversity of income sources that they rely on. As stated above, one goal of this study was to discuss the variability in CFs and develop a robust typology of them. Although Belsky (2008) proposed a CF typology based on ownership types, given the diversity of CFs we encountered in our survey (including within ownership types), we intended to develop a typology based on key characteristics, including ownership, decision-making, operational management, goals, size, and income sources. Two-step cluster analyses and Pearson's χ^2 tests were performed to assess whether the CFs in our dataset could be empirically grouped according to various combinations of these characteristics. However, limited patterns emerged for creating definitive statistical typologies. Instead, we discuss here some emergent qualitative patterns based on the descriptive statistics reported in the Results section, reflect on the diversity of CFs in the United States, and propose a basic typology for practical purposes. Finally, we discuss the difficulties in

creating a comprehensive CF inventory for the United States, given this diversity.

Ownership type emerged as a factor that seemed to shape some key functions of a CF—specifically, decision-making authority and sources of budgetary support. Publicly owned CFs (mostly by local city or town government) more often reported having either a government entity as ultimate decision-making authority or joint authority between local government and citizen councils or other local groups. They were also more reliant on government funding for budgetary support, either through federal or state grants, local government funds, or combinations of these. Privately owned CFs (mostly community-based organizations and local land trusts) more often reported having those same owners make decisions about the CF and less often reported that they formally engage in joint decision-making (although it is difficult to ascertain actual community participation in governance with our survey research design). They also more often reported relying on community donations and fundraiser events than local government funds. All five tribally owned CFs in our dataset

were run by tribes themselves, including decision-making authority and operational management. Besides these basic characteristics, however, ownership type seems to have little influence on the size of CFs, management goals, allowed activities, timber production (equally present in public and private CFs), or earned income sources.

We saw moderate regional differences in ownership and size (more government ownership and larger sizes in the West), and who the CF owner bought their forestland from. Ownership history may help explain why the median size of CFs in the West was considerably larger than in the North. The majority of CF lands in the West were purchased from private corporate forest owners, whose holdings are often in the hundreds of thousands of acres (Sass et al. 2021), and from TIMOs in particular, which typically sell land every 10 to 15 years (Zhang 2021). In contrast, the majority of CF lands in the North were purchased from family forest owners; approximately 90% of these ownerships in the United States are under 50 ac (Butler et al. 2021). Yet CFs larger than 5,000 ac occur in both the North and the West.

In both these regions, timber production often occurred across CFs of all sizes and was a primary management goal in roughly equal frequency, although not in our small sample of southern CFs. Timber production was not limited to any particular ownership type, or size class, of CF; rather, the potential to harvest timber as a management goal and source of revenue generation is likely influenced by the nature of the forest assets contained in a particular CF. Those with productive timberlands are presumably more likely than those lacking them to have timber production as a primary management goal. However, it may take years for this goal to be realized if the former owner recently harvested a substantial amount of commercial timber. All CFs across regions emphasized conservation goals, but forest restoration (phrased in the survey as “forest restoration, including wildfire management”) was cited more often in the West. Almost all CFs allowed public access for recreation and many for nontimber extractive activities for personal use. It is likely that some CFs regulate access more than others, but we could not capture this variation in our survey.

The difficulty in creating a typology of CFs is unsurprising given that, by definition, CFs reflect the values and priorities of the communities in which they are situated. Other historical, social, economic, and environmental factors also likely influence their characteristics. Additionally, policies and programs that provide funding opportunities to support CFs and their operations vary by state, influencing their sources of budgetary support. Investigating underlying factors that lead to the diversity in CF models and characteristics is a rich area for further research.

The second phase of our research (a larger project than reported here, aiming to better understand how CFs contribute to conservation and rural prosperity in the United States) uses a case-study sampling approach based on two characteristics that we postulated would be important distinguishing features of a typology: ownership of the CF and whether timber production is a primary management goal of the CF (Table 1). We acknowledge that our survey results do not show that these two characteristics are statistically related to many other factors examined here but reasoned that ownership can influence CF governance and financing mechanisms, and that the role (or lack thereof) of timber production reflects the CF's management goals,

Table 1. A basic typology based on ownership and whether timber is a primary management goal of the CF. Percentages (in parentheses) reflect percentage of eighty-two CFs in our inventory that reported on timber status and ownership.

	No timber	Timber, but not primary goal	Timber as primary goal
Public ownership	12 (15%)	14 (17%)	20 (24%)
Private ownership	6 (7%)	12 (15%)	13 (16%)
Tribal ownership	4 (5%)	1 (1%)	0

forest resources, financing mechanisms, and benefit streams. We recognize that CFs produce a host of benefits for communities beyond timber production. However, whether a CF prioritizes timber, harvests timber but does not prioritize it, or does not harvest timber emerged as an effective way to distinguish groups of CFs from each other in terms of their management priorities and resulting benefit streams. Otherwise, most CFs shared recreation and conservation-related goals.

The diversity of CFs in the United States also reflects the grassroots nature of community forests across the country, making them somewhat unique relative to community forests globally. In many low- and middle-income countries, community forests are forests managed using a top-down model imposed and defined by national CF policies or land reforms and extensive financial and technical support from external donor organizations (e.g., national or international NGOs, multilateral/bilateral aid agencies), with communities receiving some rights and many responsibilities for forest management (Charnley 2023; Hajjar et al. 2021; Ribot et al. 2006). In contrast, in the United States, CF establishment is typically driven from the bottom up, in most cases through local governments, locally based NGOs, or groups of citizens that come together to protect their local forests. There is no distinct CF tenure category at the national level and few national or state-level policies associated with community forests in the United States. Exceptions include Washington and New York states, where there are legislatively approved funding sources² to support CF acquisition and associated policy requirements once established, and the national-level Forest Service Community Forest and Open Space Conservation Program, which has supported the acquisition of numerous CFs in our inventory. This more grassroots approach results in a broad range of ownership, management, governance types, and rights and responsibilities among community members relative to many other countries. It also makes CFs somewhat hard to pinpoint in the United States, posing challenges for efforts to inventory them.

Stemming from this diversity in CFs, a key difficulty we faced in undertaking this inventory was determining what to include. Our approach to including CFs that self-identify as such or had participated in a program or policy related to CFs and met our criteria was naturally limiting. Although this approach was necessary to make an inventory possible, we acknowledge that many more CFs potentially exist than we included here, depending on how a CF is defined. In particular, our inventory captured many town forests and land trust forestlands, some tribal forests, and some state and federal forests. Yet these general ownership categories need further examination.

Town forests are local government-owned forests common across much of New England and the Northeast and in many cases may be considered CFs. They have long been established to generate income from timber and other resources for town budgets or specific projects and public services, to protect water, soil, and wildlife habitat, and to provide recreation and education opportunities for local community members and others (Baker and Kusel 2003; Brown 1941; Hovis et al. 2022; McCullough 1995). The local ownership, management, and benefits of many town forests fulfill most of the criteria of CFs as laid out above. However, the acquisition and designation of a town forest does not guarantee its long-term protection from sale or development, and depending on how much the community participates in governance, it may or may not fulfill the governance criterion of CFs (McGinley et al. 2022).

Similarly, many land trusts own forestlands that could be considered CFs, depending on how these forests are governed and managed, potentially increasing the number and extent of CFs in the United States. However, land trusts may not provide access for local communities or the general public to their forested land, may not provide for local community participation in decision-making, or may not manage their forests specifically for local benefits.

The extent to which tribal forests should be considered CFs is also complicated. Most tribal lands are trust lands, with about 56 million acres of land held in trust for tribes by the federal government (2.3% of US land area; DOI 2023). Although these lands are managed for the benefit of individual tribes, forest management activities take place under the direction of forest management and integrated resource management plans developed under the federal Bureau of Indian Affairs (BIA) guidelines and are subject to BIA approval. Since the passage of the Indian Self-Determination and Education Assistance Act of 1975 (Public Law 93-638), an increasing number of tribes have established contracts, known as 638 contracts, with the BIA by which tribal government forestry departments assume management responsibilities for forests on trust lands. These contracts are initiated by a formal request by a tribe to the BIA. By 2011, 112 tribes had taken advantage of these self-determination/self-governance opportunities for forest management, compared to 187 that relied on BIA to manage their lands directly (Gordon et al. 2013). Given this complexity in governance, it is unclear to what extent the trust lands of individual tribes meet the criteria of CFs; such classification should be undertaken by tribes themselves. Tribes can also purchase and own fee lands to which they hold title. The five tribally owned CFs in our sample (they self-identify as such) were purchased this way from private landowners. Further research on tribal forests could explore the variations in ownership, benefits, and management of these forests on trust and fee lands.

Our inventory includes two CFs owned by Washington State and one that occurs on federal lands in California. These cases may appear to contradict our defining attributes of a CF, namely that they have local, long-term ownership or tenure, and that communities have significant decision-making authority. We included the state and federal CFs in our inventory primarily because they self-identified as CFs. However, they also display several attributes of a CF. The two state-owned CFs were acquired through Washington's 2011 Community Forest Trust Program (WA DNR, n.d.). The legislation that created the program stipulated that CFs

acquired with program funds (from state budget appropriations) be state-owned, and that state agencies have ultimate decision-making authority. But the legislation also stipulated that state-owned CFs have an advisory committee composed of roughly twenty members representing diverse stakeholder interests to inform those decisions and co-develop forest management plans with citizen input, and that CF management objectives should reflect the values of local communities (WA Legislature 2011).

Regarding the federally owned case, Weaverville CF, the community manages the CF through a 10-year renewable cooperative stewardship agreement between the Forest Service and Bureau of Land Management (who own and administer different parts of the CF), and the local county resource conservation district (RCD) (Frost 2014; Kelly 2018). The RCD is responsible for implementing forest management activities and is governed by a board of directors that oversees CF management, with input from a steering committee composed of ten to fifteen members, including local citizens and agency and RCD staff. Local residents have opportunities to provide input at community meetings that occur once or twice annually. The CF is managed to meet local community needs and priorities, such as wildfire risk reduction, habitat improvement for fish and wildlife, and recreation (Frost 2014; Kelly 2018).

The question of whether CFs in the United States that self-identify as such should be considered CFs if they occur on land that is state- or federally owned—with the government retaining ultimate decision-making authority—deserves more attention and is a matter of debate among some practitioners and scholars (see Frey et al. forthcoming). The international literature recognizes CFs that occur on national government-owned land where communities have concessions to manage the forests for a specified time period (e.g., several CFs in Canada [Teitelbaum et al. 2006], Cameroon [Piabuo et al. 2018], Guatemala [Taylor 2010]); and CFs on national government land that are co-managed by the state and local communities (e.g., Tanzania; Blomley and Ramadhani, 2006). This highlights the importance of taking into account the governance criterion in defining CFs in the United States—the level of community involvement in decision-making—just as with town forests and land trusts, and opens the door for potential additional CFs on public lands that might fit the criteria but were not captured here.

Conclusion

The CFs we identified comprise less than 0.1% of all forests in the United States but are a rapidly developing model of forest ownership, governance, and management that provides local community benefits. They take a creative approach to funding and managing local forestlands through public, NGO, or tribal structures, generated income sources, and grant and donor fundraising. They have continued long-standing town and tribal forest ownership and management, helped protect forestlands and open space from imminent development, and offered innovative ways to form explicit community partnerships to manage existing public and private landscapes. As they solidify income sources and management capability, they also might serve as a new model of how market and nonmarket goods and services can be produced on forestlands for broad and enduring community benefits.

We have likely not included all individual CFs in the United States in this study and may have significant undercounts of certain types of CFs. Potential undercounts stem largely from ambiguity over which town, tribal, and private (e.g., land trust-held) forests meet our CF definition and criteria and lingering questions over whether CFs exist on federal lands. Nevertheless, the inventory will increase continually as communities develop proposals for CFs and obtain acquisition funding each year and new research is carried out. To help address this research limitation, we plan to create a centralized, publicly accessible repository that can serve as a living inventory to be updated as more CFs are either acknowledged as such or created. Although incomplete, our current inventory captures a fair representation of the variety of CF models in the United States, reflecting a diversity of ownerships, governance structures, management goals, benefit streams, and more.

This initial research to inventory and describe US CFs provides a sound base for further exploration. Future research could further explore levels of local participation in forest management and governance and when and how these variables would qualify a forest as a CF on public, private, or tribal lands. More in-depth research could also help refine our CF typology to include characteristics hard to ascertain from a survey instrument, such as level of community involvement or capacity and organizational development stage (e.g., incipient or mature). Furthermore, as more NGO-owned and town-owned forests self-identify with the label “community forest,” the consequences, advantages, and disadvantages of using that label will need further examination.

Future research could also compare CF models with traditional (noncommunity based) private and public forest ownerships to highlight their relative differences, advantages, and disadvantages. For example, some CF models share similarities but also have important differences with private family forest ownerships in terms of priority management objectives and timber production (Butler et al. 2021; Shanafelt et al. 2023), warranting a systematic comparison of ownership types. Finally, we began this exercise of inventorying CFs in the United States to better understand their contributions to conservation and rural prosperity. Better understanding the ability of communities to capture CF monetary and nonmonetary benefits (and to do so equitably) can help inform the design of policies, programs, and actions to best support CFs.

Supplementary Material

Supplementary data are available at *Journal of Forestry* online.

Funding

This study was funded in part by the USDA National Institute of Food and Agriculture, Agriculture and Food Research Initiative (AFRI) Award number 2021-67023-34426. Partial funding was also provided by the USDA Forest Service’s Southern Research Station, Pacific Northwest Research Station, and International Institute of Tropical Forestry as well as Oregon State University and North Carolina State University.

Data Availability

The authors are developing a publicly accessible repository of community forests. In the meantime, the data used in this study will be made available upon reasonable request.

Endnotes

- 1 Community forests, community forestry, and community-based forestry are terms that are often used interchangeably in the U.S. literature; however, see Frey et al. (forthcoming) and Belsky (2008) for a discussion of important differences.
- 2 The Washington State Community Forests Program was established by the state legislature in 2019 to provide grant funding for CF acquisition (<https://rco.wa.gov/grant/community-forests-program/>). The New York Community Forest Conservation Grant program similarly funds municipal land acquisitions for community forests (<https://www.dec.ny.gov/lands/124345.html#:~:text=and%20contact%20information-,Program%20Overview,Leadership%20and%20Community%20Protection%20Act>).

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