

Civic Science Partnerships in  
Community Forestry:  
Building capacity for participation  
among underserved communities



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***Abstract***

In recent decades, community forestry has challenged the management and study of forest resources based on technical expertise. Community forestry advances “civic science” to respond to the shortcomings of traditional forestry science. Civic science engages local communities and workers in the production and use of knowledge for adaptive management of the forest systems on which they depend – a knowledge based in practice. Civic science is particularly important with the underserved, whose needs are often ignored, or worse, trampled in mainstream forestry. Civic science partnerships can build the capacity of underserved communities, such as low-income and minority mobile forest workers and federally unrecognized tribes, to identify and address their own knowledge needs. By beginning with the learning needs and practitioner knowledge of underserved communities and workers—those whose lives and livelihoods are most immediately affected by forest management decisions—civic science can broaden understanding of the complexities of ecological, social, and cultural sustainability.

This paper discusses challenges, institutional barriers, and lessons learned about how to engage in meaningful partnerships between researchers and traditionally underserved communities dependent upon forests. These groups have been invisible in the U.S. forestry dialogue; their needs and the challenge of their engagement are underestimated and often ignored.

Examples are drawn from civic science partnerships with underserved communities in the Pacific West region of the United States. Lessons presented focus on initiating relationships, building reciprocity and trust, and building capacity to engage in equitable and empowering civic science partnerships.

**Keywords:** adaptive management, civic science, community forestry, participatory research, reciprocity, underserved communities

***Introduction: The emergence of civic science and participatory research in forestry***

In recent years there has been a growing interest in involving people in research. This is true in mainstream social science, where it is practiced perhaps most notably by adherents of action research and participatory action research, and more recently in forestry by community-based practitioners advocating for increased public involvement in the practice of science. Whether situated exclusively in social science or in forestry, three primary reasons for involving people in research are: to move away from the longstanding scientific project of separating the researcher from the subject of her research in search of an “objective” truth, to prevent the monopolization of knowledge and science by the elite, and to develop more holistic and inclusive approaches that are needed to understand and to solve complex problems (Fischer 2001; Park 1997; Reason 1994).

Community forestry’s call for broader participation in research represents a direct challenge to the traditional Progressive Era model of technocratic bureaucracies and scientific expertise that has guided U.S. forestry (Baker and Kusel 2003). Commonly identified with one of the United States’ first foresters—Gifford Pinchot—Progressive Era forestry excluded rural people from decision-making. Instead, it vested power and authority with experts. This model prevailed in forestry for most of the 20<sup>th</sup> Century. In recent decades, the emergence of community forestry has challenged the traditional model of expert-driven scientific practice. Its practitioners have called for increased public involvement in resource management decision-making and science. When coupled with the recognition of the complexity of forest ecosystems, and the inability of experts to resolve social and biophysical issues in forest management, this challenge represents a “tectonic” movement concerning the practice of science in forestry and resource management.

Community forestry in the U.S. involves new roles for scientists and agencies. It requires a pluralistic model of science that provides a more flexible approach to integrating diverse epistemologies, knowledge sources, beliefs, and values—a *civic science* (Borchers and Kusel 2003). This new model engages scientists as *learning facilitators* as well as researchers and involves processes that include practitioners and communities with direct experience and dependence on the forest and the landscape. Civic science in forestry is a descendent of the great American philosopher John Dewey’s call for improved democracy through citizen participation with experts (Campbell 1995).

Civic science actively engages all parties with interests in and knowledge of the forest, particularly communities that have been excluded or underserved in forest management. While the call for civic science and increased participatory research in forestry represents a vital first step toward improving and democratizing forest science and policy development, there has been limited practice and little written about the challenge and the process of including the most disenfranchised: traditionally underserved groups and those with limited resources. By underserved groups, we mean groups whose economic and spiritual livelihoods depend on the forest and who have been excluded from forest science and decision-making processes. Groups with limited resources are those with financial, human, social, and/or cultural capital constraints. Often these groups, despite

their work on the land, are invisible in science and forest management decisions. It is important to note that while the exclusion of these groups has obvious implications for the excluded, it also has implications for how we know and understand the forest. For as Vitek (1996:3) points out: “Those who work directly on the land know it in ways that are simply unavailable to those who wish to keep their hands clean and their preconceptions unchallenged.”

The Pacific West Community Forestry Center (PWCFC), a collaboration of researchers, practitioners, agencies, and communities in the western United States, works to make science more accessible to forest-dependent communities, with a particular focus on advancing civic science partnerships with traditionally underserved communities. These communities have been “invisible” in mainstream forestry and, to a lesser extent, in community forestry. Marginalized and excluded from the science and decision-making processes that affect their lives and livelihoods, they face significant challenges to their social, cultural, and economic survival. They are communities living and working at the intersection of cultural, social, economic, and ecological sustainability.

Where there is a legacy of exclusion, exploitation, and distrust, developing an equitable, mutually beneficial civic science partnership is a slow and tenuous process. Because of the limited experience and information about how these processes are initiated and advanced, in this paper we present examples and preliminary lessons from our engagement with the underserved to advance empowering civic science partnerships. The examples include a Traditional Ecological Knowledge partnership with a landless Native American tribe, an effort to develop a community forestry network among Latino forest workers, and a multi-party wild mushroom monitoring project. Though the projects are in their relative infancy, we have learned that this work is not “business as usual.” Showing up “to help” may mean being shown the door just as quickly. There is much we need to learn to be successful. How relationships are initiated, trust is built, and how partners build the capacity to engage with one another on equal footing involve processes that require careful reflection and adaptive responses. We offer the lessons below in the context of this work with our partners, learned not only through successes, but through encountering and reflecting on the barriers to engagement.

### ***Developing civic science partnerships with the underserved in the U.S. Pacific West: Lessons learned***

#### **Initiating relationships**

In a context of historical and persistent inequality, merely “setting the table” and extending invitations is insufficient to bring partners together. Rather, introductions and relationship building must acknowledge the personal, political, and cultural histories of underserved communities, and the particular challenges they face, such as immigration, loss of language and traditional knowledge, or fear of governmental authority and heavy handedness. Relationships must be initiated on the community’s own terms, recognizing their ways of gathering, and in their protected spaces. In order for underserved communities and potential research partners to gain entrée into one another’s worlds, the Pacific West Community Forestry Center has found it useful to support the work of

intermediaries—cultural translators—and to build upon relationships that have been developing over time.

The PWCFC partners with José Montenegro of El Centro Internacional para el Desarrollo Rural Sustentable (CIDERS) to increase Latino forest workers' presence and participation in the community forestry dialogue. Latino forest workers and harvesters have been invisible in mainstream forestry and nearly invisible in community forestry circles, yet they comprise perhaps ninety percent of the restoration and special forest products workforce in the Pacific Northwest. Exact numbers are unknown, due to the challenges of engaging a community that has been marginalized by bi-national labor and immigration policies. Mobile Latino forest workers and harvesters face many challenges, including language barriers; fear of deportation and abuses of undocumented workers; depressed wages and unsafe working conditions; lack of access to basic information and healthcare services; inconsistent legal interpretation and protection of worker rights; lack of worker education on permit rules, regulations, and worker rights; exclusion from agency contracts; and community isolation. As in the case of agriculture, forestry in the United States is dependent upon a mobile, Latino workforce, yet maintains patterns of exclusion that belie that interdependence, and deepen the chasm that separates Latino communities from participation in decisions that affect their lives and livelihoods.

Through acknowledging and building capacity for leadership among Latino forest workers, the partnership with CIDERS aims to create the kind of regional community forestry network in the Spanish-speaking community that has been critical to the English-speaking community forestry movement in the United States. Holistic approaches that rely on “the people’s methodologies” are employed to allow forest workers the opportunity to regain their identities and their cultural knowledge, to reflect on what they have left behind in their homelands, and to develop a sense of ownership for their own community-based solutions (Montenegro 2002).

Mr. Montenegro strives to employ community-specific approaches for relationship building, trust building, and capacity building. For example, at the request of participants, initial meetings and capacity building workshops were closed to Anglos and others outside of the Latino forest worker community. This has allowed *protected space* for Latino forest workers and harvesters to identify their own needs, priorities, and strategies that, in turn, builds a collective awareness of their cultural identities, assets, and practitioner knowledge. Creating this sort of protected space has been identified in participatory research as an important strategy to empower disempowered groups and help them to find their collective voice (Chambers 1997). As participants have outlined priorities and strategies for building their own capacity through facilitated, empowering processes, they are becoming equipped with a vision and protocols for how they wish to engage scientists and others in partnerships for community-based initiatives.

### Building-in reciprocity

An effective civic science partnership must be based on the principle that those involved will be equally empowered to participate in, and benefit from the partnership (Cunningham 2002). In working with communities that have been excluded from public

decision-making processes, or exploited by the extraction of their cultural and intellectual property, the principle of reciprocity necessitates developing ways of working together to ensure that the excluded have a voice and that the community benefits from research.

In a second project, the Pacific West Community Forestry Center is building a civic science partnership between Western science practitioners and the Maidu Cultural and Development Group (MCDG) for land stewardship. The Maidu are the largest Native American tribe in Northern California, yet they are federally unrecognized and lack sovereignty rights. Scattered among Anglo settlements throughout their vast ancestral lands, the Maidu are working to restore and preserve their knowledge of the human-ecosystem relationships that have been at play on the landscape since time immemorial. Through a stewardship project on traditional but degraded lands in the Plumas National Forest, the Maidu seek to integrate Traditional Ecological Knowledge and the knowledge of Western science toward responsive and restorative ecosystem management.

In building a Western science-Maidu Traditional Ecological Knowledge civic science partnership, the Maidu Cultural and Development Group has developed a number of protocols for engagement with research partners based on the principle of *reciprocity*. For over a century, researchers and others have extracted Maidu traditional knowledge without the Maidu receiving the benefit or products of the research. Rather, much of the Maidu traditional knowledge that has been recorded and analyzed is housed in archives in California's universities, placing a time consuming and expensive burden on the Maidu who wish to access it.

The MCDG is working to restore traditional ecological knowledge within the context of Maidu culture, language, and community life. Where knowledge is retained and archived in the community, there can be functional cultural transference to younger generations. As part of its participatory research protocols, the MCDG has created a formal process for receiving information from Maidu families about traditional ecological knowledge. The process preserves the cultural and intellectual property rights of the knowledge holder who designates what form the knowledge may take, how it can be recorded (e.g., audio, visual, written), how it may be disseminated, and where it will be stored. For the Maidu, establishing these protocols with Western scientists has been a necessary first step for a civic science partnership based on trust, reciprocity, and mutual empowerment.

#### Building capacity for effective civic science partnerships

Incremental and “bottom-up” capacity building is critical to advancing civic science partnerships. In a third project, the Pacific West Community Forestry Center is engaged in a civic science partnership for multi-party monitoring of a wild mushroom harvest, centered on the practitioner knowledge of harvesters. The Crescent Lake area of southern Oregon represents the largest wild matsutake mushroom harvest area in the United States. The matsutake, once plentiful but now threatened in Japan, is prized for cultural and culinary uses, and feeds a lucrative international market. Each autumn, approximately 1,500-2500 low-income, mobile harvesters converge in Crescent Lake for the two-month “pick,” ninety five percent of which is on national forest land. They are culturally diverse, representing six language groups (Hmong, Cambodian, Lao, Mien, English, and

Spanish), and most depend on the matsutake harvest for a significant portion of their annual incomes. Collectively, they possess a tremendous wealth of practitioner knowledge about the matsutake, a mushroom about which there is little documented “expert” knowledge.

The multi-party mushroom monitoring partnership has advanced dialogue and cooperative action among stakeholders. The aim is to integrate the knowledge of harvesters, local residents, scientists, and resource managers for management of wild mushroom species and their habitats. Respected, long-term harvesters serve as “monitors” who walk the woods and listen to harvester concerns, provide peer education on sustainable harvest practices, and document relevant social and ecological issues. The project empowers mushroom harvesters to make mushroom harvesting more ecologically sound and sustainable; monitor social and ecological conditions in the woods; participate in campground meetings to express, identify, and address harvester concerns; and engage in a dialogue with the U.S. Forest Service and other stakeholders to address issues that affect their lives and livelihoods.

The monitoring effort is built on a “bottom-up” philosophy, where building capacity for the participation of harvesters is primary. Low-income harvesters, many of whom have histories as refugees from war-torn countries, are reluctant to participate in public processes, particularly with governmental agencies. Placing harvester participation and knowledge at the center of the collaborative effort creates space and capacity for harvesters to be involved in defining the resource management challenges and problem solving. Other stakeholders such as local residents, the Forest Service, and law enforcement, who are more accustomed to mainstream public participation, can then join in the process initiated by harvesters. (Brown 2002)

The collaboration, now in its third year, has facilitated the development of harvester capacity to address issues that affect the social and ecological dynamics of the harvest. For example, during the 2001 season, harvester-monitors began to document harvester concerns about trees that were marked for logging. Upon further investigation, it was confirmed that the Forest Service had initiated a number of timber sales in prime matsutake harvest areas. Throughout the 5-year planning process, harvesters had not known of nor been included in the public comment process.

With partner assistance, harvesters engaged in a series of field trips, mapping exercises, small meetings, conference calls, and public meetings with the Forest Service. They articulated the impacts that the timber sales would have on matsutake habitat and their livelihoods, and learned about the Forest Service’s competing resource management concerns. Over the course of the 2002 season, harvesters reached a formal agreement with the Forest Service that several timber sales would be dropped, and that harvesters would be consulted in future planning processes that have relevance for the harvest. The harvesters are now established as a constituency to be consulted, rather than a “problem” to be managed. This is opening the door for joint harvester-agency research on ecological issues such as the impact of various harvesting practices on mushroom production.

### ***Conclusion***

This paper has focused on efforts to advance civic science in forestry among underserved and disenfranchised groups. In contrast to the privileging of “expert” knowledge and the internalized habits of exclusion, extraction, and disempowerment that are woven throughout the history of mainstream U.S. research and forest management, advancing civic science offers a new and vibrant means for engaging the underserved. These approaches present real challenges to institutional structures and established ways of doing business. Chambers (1997) has previously described some of these challenges. While participatory research among marginalized communities has had pockets of success in developing nations, forestry worldwide remains challenged to include these groups in substantive ways to more effectively advance adaptive management, sound resource stewardship, and democratization of natural resource science and decision-making.

Based on partnerships the Pacific West Community Forestry Center has built over the last three years, we review three experiences of working with underserved communities. From this review emerge preliminary lessons for advancing civic science partnerships. Partnering with the underserved requires relationship building that respects and works with the personal, political, and cultural history of a group. Initiation of relationships must be on a community’s own terms and, at least initially, in protected space. Intermediaries or cultural translators may be required. Secondly, building trust between scientists and communities and basing work on a principle of reciprocity is essential. Protocols that protect the intellectual property rights of communities help to assure equal empowerment and mutual benefit for all partners. Finally, incremental and “bottom up” building of group capacity and learning are essential to forming long-term civic science relationships. These preliminary lessons have proven to be vital for the development of participatory civic science partnerships with the underserved.

## **References**

Baker, M. and J. Kusel. 2003. *Community Forestry in the United States: Past Practice, Crafting the Future*. Washington D.C.: Island Press.

Borchers, J. and J. Kusel. 2003. *Toward a Civic Science for Community Forestry*. In *Community Forestry in the United States: Past Practice, Crafting the Future*, M. Baker and J. Kusel (eds.). Washington D.C.: Island Press.

Brown, Beverly. 2002. 2001 Project Report, Crescent Lake Mushroom Monitoring Program. Pacific West Community Forestry Center. Taylorsville, CA.

Campbell, J. 1995. *Understanding John Dewey*. Chicago: Open Court.

Chambers, R. 1997. *Whose Reality Counts? Putting the Last First*. London: ITDG Publishing.

Cunningham, Farrell. 2002. Maidu Cultural and Development Group. Personal Communication 13 December 2002, Greenville, CA.

Fischer, F. 2000. *Citizen, Experts, and the Environment: The Politics of Local Knowledge*. Durham, North Carolina: Duke University Press.

Montenegro, J. 2002. Latino Forest Workers Leadership Group. Presentation to the Pacific West Community Forestry Center Advisory Council, 13 September 2002, Redding, CA.

Park, P. 1997. Participatory Research, Democracy, and Community. *Practicing Anthropology* 19(3):8-13.

Reason, P. 1994. Three Approaches to Participatory Inquiry. In *Handbook of Qualitative Research*, N.K. Denzin and Y.S. Lincoln (eds.), 324-339. London: Sage.

Vitek, W. *Rediscovering the Landscape in Rooted in the Land*. In W. Vitek and W. Jackson (eds.), 1-10. New Haven: Yale University.