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Sustaining Community Change through Participatory Action Research: A Framework for Enduring Impact in Agricultural Systems[1]

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Abstract

Participatory action research (PAR) has emerged as a transformative methodology in agricultural development, blending collaborative inquiry with direct action to generate locally relevant, sustainable change. This final article in a series on PAR focuses on sustaining the impacts, relationships, and innovations generated through these community-based research endeavors. Drawing on theoretical insights from community development, systems thinking, and organizational learning, the publication outlines a framework for designing and executing PAR projects with sustainability at their core. Emphasis is placed on leadership development, institutional integration, adaptive learning, and equitable power sharing. Practical strategies are discussed, including methods for embedding PAR outcomes within policy and practice, cultivating distributed leadership, and supporting community autonomy post-project. Case examples from agricultural settings demonstrate how Extension professionals can act as facilitators of enduring change. The article also addresses challenges to sustainability, including funding constraints, institutional inertia, and equity concerns. By framing sustainability as a dynamic, relational, and iterative process, this article offers tools and principles for ensuring that PAR initiatives yield lasting benefits beyond their formal conclusion.

Introduction

Participatory action research (PAR) has the power to generate more than just research findings. When implemented thoughtfully, it can foster leadership, strengthen networks, improve agricultural systems, and reshape the way communities approach learning and problem solving. However, these outcomes are only as durable as the systems and relationships that support them. As Extension professionals consider the impact of their PAR initiatives, the question becomes: *What happens when the formal project ends?*

Sustaining change in PAR requires deliberate attention to capacity building, ownership, institutional partnerships, and long-term reflection. Sustainability does not happen by accident; it must be cultivated from the beginning and supported through the project's conclusion. This article explores strategies and considerations to ensure that PAR initiatives in agriculture lead to enduring community transformation.

Sustaining Change Starts Early

Scholars in sustainable development are using PAR to create collaborative spaces for shared investigation and the integration of diverse knowledge. This approach helps renew the role of academic research in shaping sustainability-related policies and practices (Keahey, 2021). PAR enhances and broadens the scientific process by involving ecological, agricultural, and social scientists in structured and strong collaboration with community and stakeholders (Snapp et al., 2023). Moreover, PAR has redefined the contours of research practice in agricultural systems by shifting the focus from knowledge extraction to knowledge co-production. It emphasizes inclusive inquiry, local relevance, and iterative learning, offering communities and organizations a platform to analyze their conditions, experiment with innovations, and enact change. Over the past two decades, PAR has demonstrated potential not only to improve agricultural productivity and sustainability but also to transform power dynamics, strengthen community networks, and foster democratic engagement (Bradbury, 2015; Minkler & Wallerstein, 2008; Snapp, DeDecker, & Davis, 2019).

The success of a PAR initiative is not solely measured by the quality of its findings or the effectiveness of its interventions but by the longevity of its impacts. Sustainability in PAR refers to the capacity of a community to maintain, adapt, and grow the changes initiated during the research process. This extends beyond maintaining activities or services; it encompasses enduring relationships, locally embedded knowledge, institutional learning, and continued innovation (Patton, 2010; Gonsalves, 2005).

Despite the increasing emphasis on sustainability in program design and evaluation, many community-based initiatives fall short in this area. This is especially true in agriculture, where seasonal variability, institutional rigidity, and power inequities can hinder the continuity of participatory efforts. Extension professionals, researchers, and policymakers must therefore reconsider how sustainability is conceptualized and operationalized from the very beginning to the very end of a PAR project.

This article addresses this challenge by outlining a comprehensive, theory-informed framework for sustaining community change through PAR. Drawing on case examples, interdisciplinary literature, and Extension practice, it explores strategies such as:

- Embedding sustainability in project design.
- Developing distributed, contextually grounded leaderships.
- Institutionalizing practices and findings.
- Supporting reflection and adaptation over time.
- Facilitating transitions toward community autonomy.
- Navigating equity and power dynamics in sustainability processes.

These strategies are designed to guide professionals and communities alike in designing PAR initiatives that are impactful and enduring.

Designing for Sustainability from the Outset

A common shortcoming of community-based research projects, particularly in the agricultural domain, is the tendency to treat sustainability as a final phase rather than as a foundational principle. Sustainability should be woven into the fabric of project planning, design, and implementation. Within the framework of PAR, this means aligning the project's objectives, processes, and outputs with local systems of knowledge, existing social structures, and long-term aspirations. Sustainability begins with ownership. When participants are treated as co-researchers rather than as passive beneficiaries, they are more likely to take initiative and assume leadership roles that endure beyond the research period (Kindon, Pain, & Kesby, 2007). Projects should be designed with deliberate strategies for co-creation, including:

- Joint problem framing at project inception.
- Collaborative development of research tools and indicators.
- Participatory decision-making structures **and processes** that remain functional after the project concludes.

Research by Gonsalves (2005) and Franz et al. (2010) has shown that initiatives grounded in co-design are more likely to be contextually appropriate, politically feasible, and socially legitimate. Rather than creating parallel institutions or programs, PAR initiatives should work through and strengthen existing community organizations, governance mechanisms, and informal networks. For instance, aligning agricultural research projects with existing farmer cooperatives, water user groups, or women's self-help collectives can serve as an anchor for long-term impact.

Sustainability, in this context, is about reinforcing what already works, and transforming what does not, through participatory work, reflection, and action (Wallerstein et al., 2015). Sustainability also requires foresight. Projects must include explicit transition planning from the outset, detailing how responsibilities, knowledge, and resources will shift over time. This can involve creating phased implementation timelines, conducting mid-project sustainability assessments, and drafting transition agreements with clear milestones and post-project roles. According to Patton (2010), sustainability planning should be viewed as a "developmental process," not as a discrete activity, allowing for adaptation as project conditions evolve.

Building Leadership and Capacity

At the heart of PAR is the belief that those most affected by issues are best positioned to lead change. However, leadership does not automatically emerge from participation — it must be cultivated and consolidated. Capacity building in PAR refers not only to enhancing technical skills but also to strengthening agency, confidence, and decision-making abilities within the community.

Effective PAR projects intentionally shift participants' roles over time, from informants and collaborators to co-leaders and facilitators. This might include:

- Rotating facilitation roles in meetings or reflection sessions (Franz et al., 2010).
- Encouraging community members to co-lead data collection or outreach (Wallerstein et al., 2015).
- Providing mentorship or peer-learning opportunities (Minkler & Wallerstein, 2008).
- Connecting participants to other leadership development programs (Kindon et al., 2007).

Wallerstein et al. (2015) argue that when community members occupy leadership positions, PAR becomes not only sustainable but also self-replicating. Leadership training must be culturally responsive and aligned with local social norms. For example, in patriarchal agricultural communities, women's leadership may require not just skill building but structural and relational support. Similarly, Indigenous leadership may follow collective, consensus-based traditions rather than hierarchical models.

Programs that fail to account for these contextual dynamics risk undermining local legitimacy and creating dependency rather than positive and constructive empowerment (London et al., 2013). Extension professionals play a vital intermediary role in building leadership capacity. Their responsibilities may include:

- Facilitating leadership development workshops.
- Linking participants to external training resources.
- Modeling participatory facilitation techniques and dynamics.
- Encouraging reflexivity and critical thinking in individuals and communities to guide leadership roles.

By shifting roles over time, participants move from being contributors to being conveners, champions, and organizers. In agricultural PAR projects, this might look like a farmer taking over coordination of on-farm trials or a farmworker becoming a lead facilitator in safety trainings. Leadership development also helps projects weather inevitable transitions, such as staff turnover, funding changes, or shifting priorities (Wallerstein et al., 2015). Ultimately, their task is not to lead indefinitely, but to prepare others to lead without them, which is a principle central to long-term sustainability (Sustain & Williams, 2013).

Embedding Practices into Institutions and Policy

Even the most dynamic community processes can struggle to sustain themselves in the absence of institutional support. Embedding PAR practices and findings into institutional frameworks — such as government programs, Extension services, and educational systems — can greatly enhance their durability. Extension professionals can work with public institutions to integrate PAR-generated knowledge into formal programming. For instance:

- Local governments may adopt PAR recommendations into municipal planning documents.
- Agricultural colleges can include PAR methodologies in their curricula.
- Extension agencies might institutionalize community-led monitoring systems developed through PAR.

As Jagosh et al. (2012) note, institutional uptake of participatory knowledge can lead to more responsive, equitable, and evidence-based policymaking. Partnerships between communities and institutions are key to long-term sustainability. These can take the form of:

- Advisory councils consisting of farmers, researchers, and policymakers.
- Joint funding proposals that pool resources from government and community-based organizations.
- Public-private partnerships for resource mobilization and scale-up.

Successful partnerships often rely on formalized agreements (e.g., memoranda of understanding) and clear governance mechanisms that safeguard community voices (Chambers, 1997). Institutionalization is not without risks. When institutions adopt participatory methods without a commitment to community agency, co-optation can occur. This may lead to diluted goals, bureaucratic rigidity, or tokenistic involvement. Therefore, any effort to embed PAR must be grounded in mutual accountability and regular and consistent renegotiation of roles and responsibilities (Bradbury, 2015; Wallerstein et al., 2015).

Real-World Example: Agroecology in Nicaragua

A powerful example of sustainability in PAR comes from a long-term agroecological initiative in Nicaragua, where researchers partnered with a smallholder coffee cooperative to co-design strategies for more resilient farming systems. The project prioritized inclusive engagement by translating all materials into Spanish, incorporating local knowledge, and holding regular reflection meetings that centered farmer experiences. Through this iterative, trust-based process, farmers were not only co-researchers but also co-leaders in shaping the project's direction (Méndez et al., 2017). These practices reinforced a sense of ownership and ensured that the research addressed both ecological and social dimensions of sustainability.

As the project evolved, farmers proposed forming a cooperative to support continued peer learning and resource sharing beyond the grant period. With mentorship from the PAR team, they developed a formal governance structure, secured local funding, and began leading their own field trials and community workshops. Years after the original research concluded, the cooperative remained active, hosting farmer-led trainings, conducting adaptive research, and participating in regional sustainability planning efforts. This example demonstrates how early planning for autonomy, equitable collaboration, and capacity building can lead to lasting institutional structures that advance environmental and social sustainability (Méndez et al., 2017; Zhang et al., 2024).

Supporting Reflection and Adaptation over Time

Sustainability is not a fixed endpoint but a continuous process of learning, reflection, and adaptation. One of PAR's distinguishing features is its cyclical nature, which integrates action with iterative reflection. However, this reflection must continue after formal project activities have concluded. Communities that institutionalize

reflection through annual retreats, storytelling sessions, or peer reviews are better positioned to respond to emerging challenges. These reflective practices may include:

- Post-project learning sessions to assess what worked and what did not.
- Participatory evaluation frameworks that incorporate multiple stakeholder perspectives.
- Community story sharing as a method of collective sense-making (Wang & Burris, 1997).

These strategies help sustain motivation and innovation, even when external support is minimal (Bradbury, 2015; Franz et al., 2010). Beyond the local scale, communities can benefit from forming horizontal learning networks that connect multiple PAR initiatives. These platforms enable exchange of tools, troubleshooting methods, and emergent innovations across different geographies.

For example, Snapp et al. (2019) describe how farmers in Malawi and Michigan developed cross-continental participatory research networks that accelerated innovation diffusion while honoring local knowledge systems. After a project concludes, Extension professionals can offer light-touch support to maintain reflective momentum. This guidance may include:

- Facilitating periodic check-ins or reflection events.
- Providing access to new research or policy updates.
- Coaching local leaders or facilitators.

Such support, when carefully managed, respects community autonomy while continuing to serve as a scaffold for adaptive learning (Minkler & Wallerstein, 2008).

Equity, Power, and Barriers to Sustainability

While sustainability is a worthy goal, it is not uniformly attainable across all contexts. Issues of equity, power, and access can shape the capacity of communities to sustain PAR initiatives. Power imbalances, both internal (within communities) and external (between communities and institutions), can hinder sustainability. For example, marginalized groups may have fewer resources or less political influence, making it harder to institutionalize change or secure funding. Extension professionals must remain attuned to these dynamics and work to ensure inclusive participation from the outset, support capacity building among underrepresented groups, and challenge institutional norms that may perpetuate exclusion (London et al., 2013).

This equity lens is central and essential to both the ethics and effectiveness of PAR. In addition, several structural challenges that can frequently threaten PAR sustainability include:

- Short-term funding cycles, which discourage long-term planning.
- Staff turnover, leading to loss of institutional memory.
- Shifting political priorities, especially in government-led projects.
- Overreliance on charismatic individuals, creating leadership gaps when they depart.

It is essential to anticipate and plan for these barriers. Some strategies may include diversifying funding sources, creating robust documentation, and building robustness into leadership structures (Sustain & Williams, 2013). Sustainability should be reframed not as permanence but as resilience (the ability to evolve, regenerate, and respond to changing circumstances). In agricultural PAR, this may mean adapting to climate shifts, market volatility, or technological change while holding firm to participatory values. As Patton (2010) argues, sustainable systems are not fixed but adaptive and flexible systems capable of continuous learning and transformation.

Designing for Handoff and Autonomy

A key measure of sustainability in participatory action research is the degree to which a community can continue its work independently. Designing for autonomy does not begin at the project's end; it must be an intentional feature from the start. Projects that rely solely on external facilitators, funding, or leadership are unlikely to persist beyond their formal conclusion. To foster autonomy, PAR initiatives should include structured strategies that transition responsibility to the individuals and the community. These may include:

- Co-creating sustainability plans that define how resources, roles, and decision-making will shift over time.
- Documenting key processes in manuals, visual guides, or digital archives accessible to all participants.
- Training community members in facilitation, monitoring, and budgeting so that technical functions can be internalized.
- Creating accessible resource kits or handbooks.
- Clarifying roles and responsibilities as funding sources or staff change.

Franz et al. (2010) recommend embedding local facilitators early in the process to shadow external actors, thereby building confidence and technical fluency gradually. Rather than a sudden withdrawal, the handoff should be viewed as a phased transition, where support is tapered thoughtfully as community leadership strengthens. This requires trust, open communication, and often, the renegotiation of roles as the project evolves.

Extension professionals may remain engaged in a backstopping role — available when needed but not centrally involved. This supports the long-term goal of self-directed, community-led action while still ensuring access to external technical support. True autonomy does not imply isolation. Communities must be linked to broader networks, stakeholders, gatekeepers, funding sources, and institutions that can offer technical or financial support when necessary. Building these bridges, such as identifying future funding pathways or mentoring relationships, can help communities weather and adapt to inevitable transitions and maintain momentum (Sustain & Williams, 2013).

Recognizing When to Evolve or Let Go

Not all PAR initiatives are intended to be permanent. Some projects reach their natural conclusion, achieve their goals, or evolve into new forms of collective action. Sustainability, then, should be understood not as continuation of a fixed activity, but as the durability of relationships, knowledge, and collective agency. Honoring the conclusion of a PAR initiative can be empowering. It affirms community agency, acknowledges contributions, and sets the stage for future action. Appropriate closure steps might include:

- Final reflection events or community celebrations.
- Public documentation and storytelling to preserve the project's legacy.
- Debriefing sessions to identify lessons learned and future aspirations.

Such practices reinforce the idea that communities can define and direct their own trajectories — an essential PAR value (Bradbury, 2015; Chambers, 1997). Even when a specific initiative ends, it often plants the seeds for new projects, relationships, partnerships, or leadership pathways. Extension professionals can support this by:

- Connecting participants with other networks or movements.
- Encouraging spin-off projects led by participants.
- Documenting the "generative effects" of the initiative for funders and researchers.

This aligns with developmental evaluation principles, which emphasize adaptability, iteration, and innovation as markers of success (Patton, 2010).

Conclusion

Sustaining the outcomes of participatory action research is not about replicating projects or extending funding indefinitely. It is about embedding a participatory ethos into the systems, relationships, and institutions that shape agricultural life. This requires intentional design, inclusive leadership development, ongoing reflection, and structures that support both autonomy and interdependence in a sustainable way. Extension professionals have a critical role to play — not as perpetual leaders but as facilitators, connectors, and stewards of participatory processes. Their work lies in cultivating conditions where communities can thrive with or without external involvement.

When done well, PAR becomes a living practice capable of evolving, adapting, and renewing itself across time, generations, and challenges. It holds the promise not just of better research or improved agricultural practices, but also of more just, resilient, and empowered individuals and communities.

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