Integrating agroecology and participatory action research (PAR): principles and characteristics1

Integrando la agroecología y la investigación acción participativa (IAP): principios y características1

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Thematic Focus: Building Agroecological Knowledge

Resumen

En la última década se ha visto un incremento en los avances e interés en la integración de la agroecología y la investigación acción participativa (IAP). Los Objetivos principales de este artículo son: 1) revisar estudios de caso que han buscado integrar agroecología e IAP; 2) identificar características y principios clave en los procesos de agroecología e IAP; y 3) extraer y discutir leecciones de los estudios de caso revisados, para mejorar futuros trabajos. Los principios clave que identificamos en los procesos de IAP agroecológicos incluyen el interés compartido por la investigación de los actores involucrados, la certeza de los beneficios del poder y acción colectivo, el compromiso a la participación, la práctica de la humildad, y el establecimiento de la confianza y la rendición de cuentas. Lecciones importantes para considerar en futuros trabajos incluyen: 1) Procesos de investigación que no empezaron como IAP, pueden evolucionar hacia ello; 2) La participación de los actores en definir la agenda de investigación, desde el principio, resulta en mayor involucramiento y mejores Resultados; 3) Es importante contar con los socios adecuados para lograr los Objetivos deseados; 4) La reflexión explícita e intencional es un componente esencial de la IAP; y 5) Las colaboraciones inter-generacionales son esenciales para beneficios a largo plazo.

Palabras Clave: Community-based research; Transdisciplinary research

Abstract

The last decade has seen an increasing advancement and interest in the integration of agroecology and participatory action research (PAR). This article aimed to: 1) review case studies that have sought to integrate agroecology and PAR; 2) identify key characteristics and principles of PAR and agroecology processes; 3) extract and discuss lessons from the case studies reviewed, which can improve future work. Key principles identified for effective PAR agroecological processes include a shared interest in research by partners, a belief in collective power/action, a commitment to participation, practicing humility and establishing trust and accountability. Important lessons to consider for future work include: 1) Research processes that did not start as PAR, can evolve into it; 2) Farmer/stakeholder participation in setting the

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research agenda, from the onset, results in higher engagement and enhanced outcomes; 3) Having the right partners for the desired outcomes is key; 4) Intentional and explicit reflection is an essential component of PAR processes; and 5) Cross-generational collaborations are crucial to long-term benefits.

Keywords: Community-based research; Transdisciplinary research

Introduction

The field of agroecology has gained considerable recognition in the last decade and is now viewed broadly as an approach encompassing a diversity of perspectives. We define agroecology as an approach that seeks to integrate ecological science with other academic disciplines (e.g., agronomy, sociology, history, etc.) and knowledge systems (e.g., local, indigenous, etc.) to guide research and actions towards the sustainable transformation of our current agrifood system (Gliessman, 2015; Méndez et al., 2016). This definition embodies a transdisciplinary-oriented agroecology, which integrates different knowledge systems and an agrifood systems perspective (Francis et al., 2008; Ruiz-Rosado, 2006). It also acknowledges that agroecology has expressions as a science, a practice and a social movement (Wezel et al., 2009), which may be most effective when these three dimensions converge. The integration of farmer/local and scientific knowledge represents one of the core junctures of science and practice in agroecology, and opportunities to apply participatory action research (PAR).

Real trials of scientist/farmer collaborations play out when PAR and agroecology are combined, which inevitably includes challenges of access, different research styles, time constraints and power differentials (Bacon et al., 2005; Bentley, 1994). In addition, the use of PAR by individuals who have only a passing interest in places or topics is problematic, since those who are not committed to a long-term, flexible process have little chance for success (Bentley, 1994). Despite these criticisms (Bentley, 1994), PAR is lauded for leading to articulating problems and potential solutions that acknowledge situational perspectives (Dlott et al., 1994), while also demonstrating a utility for helping to understand issues across multiple spatio-political scales (Eksvärd and Rydberg, 2010; Kindon et al., 2007). Many agroecological researchers have chosen to embrace PAR from the different types of participatory research approaches (Méndez et al., 2016), which span diverse academic disciplines and research methodologies (Greenwood and Levin, 1998; Kindon et al., 2007; Minkler and Wallerstein, 2008; Whitmer et al., 2010). This makes it important to critically assess and learn about the limitations of and potential for this integration. The objectives of this article are to: 1) review case studies

that have sought to integrate agroecology and PAR; 2) identify key characteristics and principles of PAR and agroecology processes; 3) extract and discuss lessons from the case studies reviewed, which can improve future work.

Integrating Agroecology and PAR

Méndez and colleagues (Méndez et al., 2016) discussed the alignment of PAR and agroecological principles, including valuing different types of knowledge systems, paying attention to local context, and acting at multiple spatial and socio-political scales. There are many experiences integrating PAR with agroecology in a variety of contexts, which contain interesting lessons to improve future work. For example, Dlott and colleagues incorporated this approach into their work on pest management with peach farmers in California (Dlott et al., 1994). In Southern Spain, researchers associated with the agroecology graduate program with the International University of Andalucía (UNIA), have carried out long-term PAR and agroecology-oriented processes with a variety of farmers (Cuéllar-Padilla and Calle-Collado, 2011; Guzman et al., 2013), focusing on different socio-ecological issues. The Community Agroecology Network (CAN) has collaborated on PAR processes with Santa Clara University and the University of Chapingo, on food security and sovereignty of coffee farmers in Nicaragua (Bacon et al., 2014; Putnam et al., 2013) and Mexico (Nyantakyi-Frimpong et al., 2016; Putnam et al., 2016. In Malawi, a collaboration including African, U.S. and Canadian universities and non-government organizations has used the PAR approach to assess agroecological management as a contribution to rural households affected by HIV/AIDs {Nyantakyi-Frimpong, 2017 #4248). When used with agroecological principles, PAR offers an opportunity for integrating the knowledge of non-researchers (i.e. farmers, community members, etc.), with that of those trained more formally in research and experimental design. Ideally, the result of this collaborative work is knowledge that has been co-created and that is actionable.

Characteristics and Principles of PAR

One of the greatest strengths of PAR is that it embraces complexity and flexibility, which is a break from more reductionist scientific models (Bezner Kerr et al., 2016). PAR seeks to pursue authentic commitment and contributions from both research and non-research partners, as well as seeking transformational actions that support the partners in the process (Fals-Borda and Rahman, 1991). The PAR approach described in this paper proposes iterative cycles of research, reflection and action (Figure 1). As an emergent process, PAR is not always asserted when beginning, but can evolve and

progress with the right intentions and the dedication of participating actors (Greenwood et al., 1993). However, the process requires intention and facilitation, and many researchers interested in using PAR sometimes fail to engage in a period of relationship and trust building with partners, frequently because of budgetary or time restrictions. We find the term 'preflection', used by scholars focusing on experiential learning (Jones and Bjelland, 2004; Wingenbach et al., 2006), as a useful descriptor of this initial stage (Figure 1).

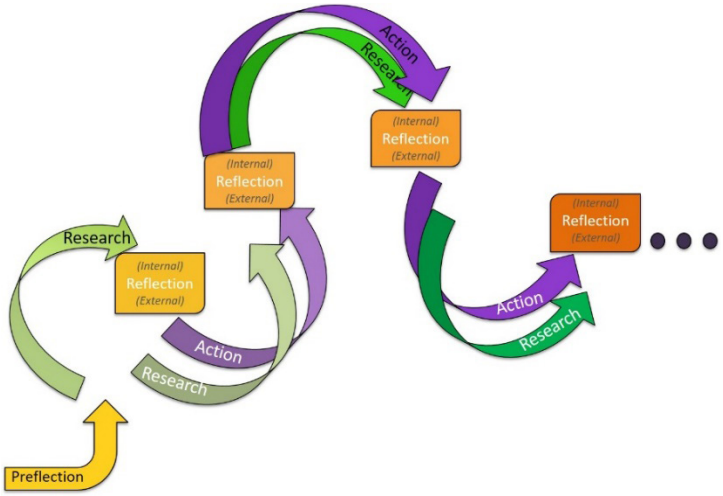

Figure 1. The iterative participatory action research (PAR) cycle (modified and expanded from Bacon and colleagues (Bacon et al., 2005). Source: (Méndez et al., 2017).

PAR Characteristics and Principles

PAR processes are frequently 'impure' and messy, and can begin at any of the stages of the cycle (i.e., preflection, research, reflection or action) (Figure 1). Sometimes these processes will evolve into PAR, and other times they will fall short. Hence, determining if a process is meeting the basic requirements of PAR is not straightforward. Determining how a PAR process evolves, and the nature of its outcomes, is largely a result of the characteristics and principles that participants use and apply in their specific situation (Méndez et al., 2013). We have identified the following key characteristics and principles that seem to distinguish PAR processes.

Characteristics

PAR is a complex, negotiated process, where partners articulate potential contributions, advocate for specific interests and tangible benefits that they hope to obtain from the process.

PAR processes rarely follow a predictable timeline, and often result in periods where focus is more heavily directed toward one of the components of a cycle.

Patience, flexibility and accountability are key to identifying and assessing emergent features, and seek to maintain the interests and/or agenda(s) of all partners involved.

Long-term collaborations cannot be sustained without significant investments of time, resources and effort.

Principles

Shared interest in research—PAR facilitates the identification of appropriate solutions to real-life problems, through diverse methodologies and multiple perspectives.

Belief in collective power—the PAR process will achieve ends through the contributions of each actor to the initiative, and which would be difficult to accomplish any other way.

Commitment to participation—All partners share ownership of or have contributing roles in as many phases of the research as possible—starting with defining research questions, through data collection, analysis of results, and eventually engaging in actions that represent co-created solutions.

Humility—Space to honor the depth and acknowledge the limitations of each partners' knowledge is fundamental to transdisciplinary work where contextual, practical and technical expertise are each valued.

Trust and accountability—Partners recognize that actions, not words, are what establish a strong base for ongoing collaboration, and intentional design includes opportunities for partners to share leadership and mechanisms for resolving conflict.

Communication—Partners amplify traditionally marginalized voices and perspectives, acknowledge biases, establish an expectation for transparency and prioritize disseminating results in multiple formats to increase accessibility.

Challenges and Conflict in PAR Processes

Researchers using PAR have reported several important challenges (Bacon et al., 2005; Bentley, 1994; Selener, 1997), including: 1) differing levels of participation from specific partners; 2) a requirement of considerable time and resources, but with a limited reach (i.e., small scale); and 3) issues of power imbalances (i.e., who controls the process), among others. In addition, PAR processes are spaces where different individuals and organizations interact (i.e., farmers and researchers, NGOs and universities), or 'engage', which at some point or another will usually lead to some degree of conflict

(Grudens-Schuck, 2000). In addition, PAR work can be transformational at the individual level, which can lead to both personal and inter-personal conflicts (Cahill, 2007). Fox (2006) warns that PAR processes are fraught with social tensions, which can include: 1) the presence of 'invisible actors' that are outside of the process but influence it; 2) tensions between academics and non-academics in agenda setting, and 3) doing no harm when faced with the 'dirty laundry' brought by some of the partners (Fox, 2006). PAR is also a process fraught with power dynamics, which relates not only to the gender, class and race of the partners involved, but also to the internal dynamics of both researcher and non-researcher communities (Cahill, 2007; Fals-Borda and Rahman, 1991; Kindon et al., 2007).

Discussion

Some of the key principles identified for effective PAR agroecological processes include a shared interest in research by partners, a belief in collective power/action, a commitment to participation, practicing humility and establishing trust and accountability. Some of the important lessons that we extracted from the PAR and agroecology processes we reviewed, include: 1) research processes that did not start as PAR, can evolve into a PAR process with intention and commitment; 2) farmer/stakeholder participation in setting the research agenda and contributing to study design from the onset, results in higher engagement and enhanced research and action outcomes; 3) Identifying and recruiting the right partners is critical to achieve desired outcomes; 4) intentional and explicit reflection is an essential component of PAR processes; and 5) PAR processes can serve to identify and better integrate marginalized groups, such as women, and youth and the landless, which is crucial for long-term and more equitable benefits.

Within academia, there is a growing demand for universities to 'democratize research' and build partnerships with communities. Development organizations and farmer groups alike have also called for a new way of doing research and the need to train the next generation of researchers. PAR is a fitting approach for agroecology, which seeks to contribute to a transformation towards healthier, more sustainable food systems. It is also important for research to incorporate aspects of practice and the concerns of social movements as they relate to their partners and issues. Looking for strong collaborations that include multiple organizational types is a good start, since purely academic endeavors of agroecology and PAR will fall short of achieving real change if they are disconnected from political processes and/or social movements.

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