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Regards – Focus

A reflexive collaborative workshop on agroecology narratives and researchers' postures

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Abstract – Agroecology has multiple interpretations and goals, driven by social movements, political contexts, and scientific needs. Agroecological transition processes generate tensions between social movements and institutionalisation processes. Researchers are thus caught between two potentially contradictory tasks: (i) advising policy-makers and (ii) supporting farmers and stakeholders in their endogenous trajectories. Here, we review a reflexive workshop that explored how agroecology narratives challenge researchers when supporting implementation of transdisciplinary collaborations. We highlight the need to create new researcher profiles, including facilitators in long-term partnerships, establish clear expectations, and develop 'third spaces' for collaboration. Qualitative research assessment and new epistemological approaches are crucial for sustainable science that bridges the gap between knowledge and local realities in agroecological transitions.

Keywords: agriculture / research / sustainability science / transdisciplinarity / knowledge community

Résumé – Un atelier collaboratif réflexif sur les narratifs en agroécologie et les postures de recherche. L'agroécologie est un terme polysémique qui peut être porté par des courants parfois contradictoires. Les processus de transition agroécologique induisent des tensions entre les initiatives enracinées dans les mouvements sociaux et les processus d'institutionnalisation. Les chercheurs sont ainsi tiraillés entre deux tâches potentiellement contradictoires : (i) conseiller les décideurs politiques et (ii) soutenir les agriculteurs et les parties prenantes dans leurs trajectoires endogènes. Cette étude aborde cette tension en se concentrant sur le rôle des scientifiques dans les collaborations transdisciplinaires à long terme. Elle passe en revue un atelier transdisciplinaire de deux jours organisé par la communauté de savoirs « Terres et Sols » (CoSav Terresol), qui est portée par l'Institut de recherche pour le développement (IRD). Les 40 participants, comprenant principalement des chercheuses et chercheurs, mais aussi des agricultrices, des représentantes d'ONG et des représentants des décideurs politiques, se sont engagés dans des activités réflexives et des ateliers collaboratifs afin de partager leurs expériences et d'explorer les différents narratifs de l'agroécologie et les postures de recherche impliquées dans des transitions agroécologiques. Les résultats soulignent le besoin de compétences transversales et de facilitateurs pour aider les scientifiques à dialoguer avec les différentes parties prenantes. Cela inclut la nécessité de questionner les narratifs et de considérer les implications éthiques des partenariats à long terme dans la production de connaissances agroécologiques.

Mots-clés : agriculture / recherche / science de la durabilité / transdisciplinarité / communauté de savoirs

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Introduction¹

Agroecology encompasses agricultural practices inspired by ecology, environmental sustainability, social movements, and scientific challenges (FAO, 2018; López-García et al., 2021). It has gained significant traction in science and the media due to its intersection with multiple societal expectations. Despite its longstanding development throughout the world, inclusion of agroecology in the political discourse and agricultural policies is uneven. Regional or national socio-political dynamics can strengthen or weaken transition initiatives led by farmers or civil society. Depending on the national context or the actors' position in society, various agroecology narratives meet and/or confront. Overall, actors are caught between an activist/militant approach that is rooted in agroecology as a social movement and pathways for institutionalising its principles (Giraldo and Rosset, 2018), as was the case for organic farming (Van Dam and Nizet, 2014). These dynamics set up tensions between proponents of a full paradigmatic and radical transformation of agriculture and food systems and those who advocate a gradual, cautious, and evidence-based approach (Walthall et al., 2024).

In the academic realm, these tensions also create credibility concerns in the production of knowledge. Researchers can be actors in the transition process, with at least two tasks: advising policy-makers by providing scientific evidence and supporting farmers and citizens in their innovative and adaptive practical experiments. This dual role is crucial for legitimising agroecological transitions in agricultural policies and strengthening sustainable agricultural practices by using appropriate research methods for assessment and action. This review focuses on the second task, although it draws on a broader view of the complexity of positioning scientific research between policy-making and local actors' expectations (Giraldo, 2019; Tittonell, 2014).

Indeed, the entire academic community is called to move towards more sustainable and transdisciplinary goals and methods. Achieving sustainable science requires exploring reflexive postures and developing new pathways for co-constructing knowledge (Dangles and Fréour, 2023; Kates et al., 2001). For agroecological transitions, it is important to engage in a transdisciplinary dialogue that recognises the relevance and credibility of farmers' knowledge. Furthermore, it is crucial to consider farmers as research actors and partners. Collaborative and action-oriented research are essential dimensions in the transition to sustainable agriculture. They allow farmers to anchor their transition pathways in an enriching and rigorous knowledge dialogue (Méndez et al., 2013). In this context, interdisciplinary and transdisciplinary platforms, as well as collaborative workshops, can be fertile ground for deepening thoughts and experiences in scientific paradigms and methodological transitions.

Here, we review a reflexive collaborative workshop on agroecology narratives and researchers' postures organised by the 'Lands and Soils' knowledge community ('CoSav Terres et Sols' in French²). This knowledge community is part of the commitment of the French National Research Institute for Sustainable Development (Institut de recherche pour le développement, in French [IRD]) to more sustainable and inclusive research through nine key societal challenges, including land, climate, sustainable cities, and biodiversity. The 'Lands and Soils' knowledge community was established in 2022 and has over 260 members who come from many institutions worldwide. Its purpose is to provide a platform for inter- and transdisciplinary dialogue with on sustainable land and soil management and to contribute to the IRD's long-standing regional partnerships in southern countries. This knowledge community provides an example of how to take a reflexive path towards a transdisciplinary approach.

Approach and methods

The 'Lands and Soils' knowledge community holds an annual thematic workshop to promote an open and reflexive dialogue among its members. In October 2023, the workshop focused on agroecology narratives and questioned the political positioning and epistemological posture of researchers in agroecological transitions. The topic was selected based on the growing diversity of how agroecology is integrated into agendas by public policies and social movements around the world. Accordingly, the workshop addressed the following questions: What missions are expected from research in the context of agroecological transitions? How do researchers reconcile their commitment to agroecology with their research goals? How do researchers commit to finding solutions with people? One of its goals was to share and compare the narratives and experiences of agroecology within the cultural context of the members of the knowledge community. It was attended by 40 participants, mainly researchers, but also a variety of actors, including farmers, representatives of nongovernmental organisations (NGO), and representatives of public policies.

¹This workshop review was also presented as an oral communication (https://doi.org/10.5281/zenodo.12733006) at the 15th Conference of the International Farming System Association, whose main topic was 'Systemic change for sustainable futures'.

² https://terresetsols.ird.fr/en/.



Fig. 1. Diagram of the nine interactive or informative sessions (S1-S9) and activities of the two-day workshop.

The two-day workshop alternated between nine interactive or informative sessions (Fig. 1). Four interactive sessions provided structure to the workshop by gradually increasing participants' engagement in a variety of group activities. Participants either rotated among activities in series or were assigned to one of two or three parallel groups. Five informative sessions provided instructions for and drew conclusions from the interactive sessions; they also involved speakers from different backgrounds to establish common ground among participants. The interactive sessions were designed with a professional cooperative consulting firm with experience in participatory approaches (LISODE³). The workshop had two objectives: (1) allow individuals to express their concepts and experiences and (2) formulate collective answers to the introductory questions. These groups were redefined after each activity to stimulate combination of individual perspectives.

On the first day's informative session, an international panel of speakers from several spheres, including NGO practitioners, researchers, and policy-makers, described organisations that promoted agroecology in several contexts. The session covered mainly West Africa, the Maghreb, Latin America, Southeast Asia, and France. Then, the following interactive session moved participants through three serial group activities: (1) choosing keywords to define agroecology, (2) providing critical feedback on personal experiences in agroecology, and (3) identifying relevant actors of a hypothetical agroecology project. This project, described by a generic rural context and community, allowed participants to compare narratives without referring to a specific geographical context.

The second day was dedicated to collaborative research and postures. It began with an informative session that focused on farmers' perspectives of agroecological research, which were represented by testimonials by two women farmers: one a member of the European Coordination Via Campesina⁴ and the other who breeds Tarassac onions (De Bon, 2022). In the following interactive session, the participants were split into two parallel groups to discuss (1) interactions between research and peasant agroecology or (2) requirements for collaborative research. Both groups then addressed the same question: How should research consider societal and policy-makers' expectations? Then, in the final interactive session, the participants were split into three parallel groups to simulate a meeting with a local community to report on the five-year hypothetical agroecology project that had been introduced on the first day, using one of three distinct research approaches: top-down, fully collaborative, or openended. Participants alternated between playing the project consortium and the local community members. In the closing mixed interactive-informative session. participants were asked to evaluate the workshop anonymously by writing feedback on sticky notes and placing them in categories on a board. This activity was followed by a final summary and debate of the key insights.

Findings

The international panel on the first day provided roundtables and debate on the heterogeneity of local and global agroecological transitions from a variety of actors from Senegal, Algeria, Cambodia, and Brazil. For example, participants learned about Senegal's multiactor DyTAES network⁵, which promotes agroecology and has gained some recognition from Senegalese authorities. Unfortunately, the Dakar 2 'Feed Africa' summit in 2023 did not include agroecology in its strategic discussions (Africa Food Summit, 2023). Similarly, despite notable interest from farmers and pioneering initiatives, such as the living lab implemented

³ https://www.lisode.com/en/.

⁴ https://www.eurovia.org.

⁵ https://dytaes.sn/.

by the European Union NATAE project in Algeria⁶, agroecology remains conspicuously absent from the Maghreb's agricultural framework. Recent changes in the Oasis farming system are an example of how new farming practices can threaten the traditional system and lead to the loss of a source of agroecological knowledge and practices. In Southeast Asia, public institutions and funding agencies mention agroecology, but it could be applied more effectively. Finally, Brazil was presented as the region where agroecology is institutionalised the most, but the related policies tend to be associated with left-wing governments and rejected by right-wing parties. This situation illustrates that changes in political majorities can weaken the continuity of agroecological policies and transitions. These differences highlight the crucial role and difficulties that policy-makers face when implementing long-term agricultural and agroecological policies. Support for agroecological transitions may be hindered by political ideologies and/or by policymakers' expectations for agronomic and economic benchmarks before endorsing significant policy shifts.

Agroecology is a polysemic term, as confirmed by the group activity to define it collectively. The three distinct definitions that resulted emphasised (1) the importance of social and farmer-related components, (2) the scientific and multidisciplinary aspects of agroecology, and (3) the need for sustainable farming practices. These definitions are complementary but reveal the potential for conflict to arise from the plurality of understanding and priorities. Only two keywords were present in all three definitions: 'diversity' (alone, or in combination with 'bio-' or 'socio-') and 'systems' (alone, or in combination with 'agro-', 'eco-', or 'socio-eco-'). The differences and similarities highlight the importance of contextualising agroecological transitions and considering the diversity of actors involved in these processes at multiple levels. Although each experience is unique and context-specific, sharing experiences can help identify common constraints and successes. Successful initiatives can inspire others by clarifying paths and mistakes.

Pathways of agroecological transitions also vary at both local and individual levels. At the farm level, the farming system defined as the starting point (Tittonell, 2020) of the transition processes (e.g. industrial or peasant agriculture) induces specific characteristics in, and requires adaptation of, the transition pathway adopted. Agroecology research requires addressing complexity and heterogeneity and considering socioagroecosystems as a whole. To support and assess transition pathways, it is important to consider not only ecological and physical contexts but also socio-political and cultural contexts. At the individual level, personal and professional paths also influence the adoption and implementation of agroecology. The workshop activity that described individual paths highlighted the variety of key elements that influenced personal involvement in agroecology. The discussion focused on sharing experiences of implementing agroecology in different spheres, such as research, farming, civil-society actions, and policies. To guide this activity, a four-stage framework was designed to describe these paths: fertile ground, barriers, actions to perform, and paths for the future (Tab. 1).

Collective thinking and transdisciplinary collaboration that involved researchers and extra-academic actors allowed us to begin with the diversity of individual experiences shared by a small group of people to reach more general trends in agroecological paths. Results of this collective learning (Tab. 1) can help increase understanding of the complexity of agroecological transition pathways by addressing the multifaceted nature of these experiences and the barriers that can arise at different spatial and temporal levels. The political significance of agroecology and deep connections to institutions, power structures, and policy-making processes can become barriers at the individual and collective levels and challenge traditional ideas of scientific neutrality. This reality emphasises the expectation that researchers engage actively with sociopolitical dimensions and shift from researching for partners towards researching with them. Integrating diverse knowledge systems was mentioned also as a challenge, which highlights the critical importance of dialogue between scientific knowledge and local and experiential knowledge. The persistent resource constraints that influence research activities and practical implementation of agroecological methods are more difficult barriers to overcome. Taken together, these findings highlight some important challenges, which are presented as actions and paths (Tab. 1). These include the need for a holistic approach to agroecological research and practice that can integrate reflexivity, ethical perspectives, and political realities while working towards more equitable resource distribution and knowledge complementarity.

This activity provided an opportunity for researchers involved in agroecological research and transition to share and discuss the uncomfortable position of being caught between socio-political engagement and scientific requirements. It emphasised the importance of consolidating networks and working collectively to break down feelings of isolation. When addressing agroecological transitions, a researcher is expected to collaborate with farmers to find solutions to practical problems but also to respond to standards of scientific assessment and publication. These expectations can result in conflicting and sometimes incompatible timeframes and objectives,

⁶ https://www.natae-agroecology.eu/.

Tab 1. Stages in individuals' agroecology path based on workshop results

Stage in the path	Description by the participants
Fertile ground	Initial interest in ecology and naturalism
	Interdisciplinary experiences face complex questions
	Differences between personal and institutional visions
	Teaching experiences
Barriers	Complex systems at multiple spatial and temporal levels
	Political issues (agroecology is not neutral)
	Diversity of knowledge
	Access to funding
Actions	Promote reflexivity and personal transformations
	Transform practices and paradigms (e.g. research posture)
	Promote individual resistance to conservatism
	Counter reductionism
	Assume ethical positions and engaged values
	Form teams to work collectively
	Change teaching programs
Paths	Adopt more sustainable lifestyles
	Communicate a more attractive vision of agroecology
	Consider political dimensions in agroecological research
	Co-design research projects that focus on actors' concerns
	Provide training on inter/transdisciplinarity methods
	Contribute to more inclusive narratives
	Provide time and place to express and share agroecological experiences
	Lobby funding agencies

which calls for adapting research frameworks and evaluation criteria to reflect the specific characteristics of collaborative transdisciplinary research. As transforming practices and paradigms, especially adopting a transdisciplinary research posture, can be challenging, experiences need to be shared to promote a reflexive approach and consolidate experimental methods. Transdisciplinarity goes beyond academic issues and resonates with the needs and concerns of society. Assessing the risks and impacts of transitioning towards agroecology and sustainable farming practices provides an opportunity to explore multiple pathways for scientific experimentation with field actors (Cuéllar-Padilla and Calle-Collado, 2011). Collaborative assessment and experimentation are needed to consider the understanding and knowledge of local actors and open a debate on paradigms and practical implications related to developing indicator frameworks.

The presentations by the two farmers and the following roundtables and debate on the second day provided an opportunity to learn about farmers' visions. They emphasised that crucial issues might remain unaddressed without this discussion. For example, they identified the ethical and legal aspects of seed production and distribution as critical to define at the beginning of a participatory breeding project. They also expressed the desire to be considered as partners in producing knowledge rather than simply technicians or holders of farming knowledge and they shared the importance of considering sensitivity and affectivity as essential aspects of agroecological experiences. This session was a small step in the long process of mutual understanding between researchers and farmers. It was also a moment in which to consider agriculture as a way of life and farming practices as immersive and sensitive experiences. Knowledge dialogue should consider understanding, perceptions, and sensitivity beyond the technical aspects of transition.

During the final interactive session, on researchers' postures and methodologies based on a simulation exercise, it was challenging to avoid caricatures, such as extreme top-down academic approaches or overly inclusive participatory approaches. Nevertheless, it was a valuable exercise in practising humorous selfcriticism and imagining alternatives collectively. From this session, participants concluded that scientific research and participatory and cooperative approaches need to complement each other to varying degrees throughout long-term research partnerships.

In the closing session of the workshop, the participants indicated that the activities had met their initial expectations. The activities made explicit the need to include funding agencies and obtain more information from field actors in such a reflexive workshop on researchers' postures. In this vein, the participants specified the central role of social sciences in contextualizing and legitimizing the relevance of field-based knowledge. Living labs and other long-term partnerships were mentioned as critical frameworks. The main originality of the activities was the call by both researchers and extra-academic actors for mutual understanding of each other's professional goals and acknowledgement of skills and capabilities in the production of knowledge to support agroecology.

Methodological and practical implications

This open and reflexive workshop provided a platform on which to identify shared concerns and recommendations in the 'Lands and Soils' knowledge community. These key elements are expected to resonate with other agroecological research experiences and strengthen transformative initiatives. They can also inform orientation strategies of institutions, but still require addressing implications of and opportunities for funding, as well as including a wider panel of experts from more professional and geographic backgrounds. Several methodological and practical outcomes emerged from the discussions:

- create new researcher profiles with transversal skills to facilitate transdisciplinarity;
- include a facilitator in each long-term transdisciplinary research project and partnership;
- clarify requirements and advices for obtaining formal commitment to collaborative research;
- create 'third places' to facilitate multi-actor meetings and co-construct research questions and projects;
- promote qualitative changes in research and researcher-assessment frameworks to improve inter- and transdisciplinary considerations.

These outcomes are original because they emerged from a reflexive process based on practical experiences and were contextualised to improve research practices in a specific knowledge community (i.e., CoSav Terresol). However, they can be related to older research approaches such as participatory action research (Grant et al., 2008; Mackenzie et al., 2012) and collaborative research (Desgagné, 1997; Morrissette, 2013). Indeed, these research approaches are based on researcher-actor partnerships and need to experiment and develop tools, methods, and profiles to facilitate and energise these processes (Basagoiti Rodríguez et al., 2001). In this context, 'third places' emerge in citizenscience approaches (Lhoste, 2020), as do a variety of living labs and similar concepts in agroecology (McPhee et al., 2021).

These methodological and practical implications highlight the need to articulate short- and long-term projects to (1) produce practical knowledge and impact assessments and (2) monitor and support agroecological practices and system transitions. Multidisciplinary research institutions such as the IRD are well positioned to facilitate dialogue between agroecological researchers and local actors. This opportunity requires using stable means and long-term partnerships as much as possible.

Theoretical implications

This review contributes to transdisciplinary thought on the role of researchers in producing knowledge on agroecological transitions. The urgent need to design sustainable pathways for agricultural production must consider complex local socio-technical systems. As both researchers and local actors acknowledge the need for multi-actor platforms, mutual consideration and understanding are crucial for the success of transdisciplinary projects, which can achieve better results through long-term partnerships. This review also discusses the utility of increasing the synergy between short-term, even top-down projects that produce quantitative results about agroecological practices and long-term collaborative projects that use both empirical and academic knowledge in a broader socio-technical context.

Regarding research postures, this review highlights the need to strengthen skills in a holistic approach that includes ecology, agronomy, socio-anthropology, and complexity science. Doing so implies several epistemic challenges concerning the need to (1) deconstruct and contextualise narratives, (2) clarify ethical considerations for partnerships, (3) develop skills in collective governance and legal aspects, and (4) develop inter-/ transdisciplinary theoretical frameworks and methodologies. Despite awareness of these challenges in promoting knowledge co-production, transdisciplinarity, and the related 'wisdom dialogues' (Anderson et al., 2019; Méndez et al., 2013), researchers develop new conceptual frameworks (Walthall et al., 2024) and principles (Sumberg et al., 2023) more easily than selfreflexivity (Fernández González et al., 2021; Rossi, 2020). In this regard, this review draws upon general epistemic trends but uses an example of a research community's self-assessment of postures that promote new patterns of commitment to systemic change for sustainable futures.

Sustainable sciences are complex and demanding for researchers, whose tasks are multiple and assessed using indicators that should consider heterogeneous and innovative pathways. In agroecology, partnerships with civil-society actors are crucial for producing relevant local knowledge and guaranteeing that local actors' concerns and priorities are considered when advising policy-makers. The two tasks described here can ultimately be seen as two aspects of the same commitment to place science at the service of more sustainable and equitable human societies.

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