



Researcher Roles in Transdisciplinary Projects: Latin American Perspectives

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Abstract: Transdisciplinary research often requires researchers to go beyond their traditional roles and assume additional responsibilities, acting as self-reflective researchers, knowledge intermediaries, process facilitators, or even change agents or activists. While the challenges associated with these roles - whether for knowledge co-production, project implementation, decision-making, or policy development - have been widely discussed, most studies focus on contexts in the Global North. To help bridge this gap, this article analyses, from a qualitative perspective, the roles that we, as researchers play in transdisciplinary projects situated in Latin America. Drawing on an online-survey administered among the research team to systematize our reflections on our experiences, we explore the challenges we face in adopting multiple roles in this type of research, such as the increased time commitment required for project management, the need for greater institutional support and funding, and the mediation of epistemological, communication, and agenda-related differences between researchers and third-party stakeholders. Finally, we compare our findings with existing literature, highlighting the similarities, differences, challenges, and opportunities we see between the Global North and Latin America.

Keywords: knowledge production; knowledge integration; participation; role of researchers; sustainability; academic activism; participatory action research

Resumen: La investigación transdisciplinaria a menudo requiere que los investigadores vayan más allá de sus funciones tradicionales y asuman responsabilidades adicionales, al actuar como investigadores autorreflexivos, intermediarios del conocimiento, facilitadores de procesos o incluso, como agentes de cambio o activistas. Si bien se han debatido ampliamente los retos asociados a estos roles tanto para la coproducción de conocimiento, la implementación de proyectos, la toma de decisiones o el desarrollo de políticas, la mayoría de los estudios se centran en contextos del Norte Global. Para contribuir a cerrar dicha brecha, este artículo analiza desde un enfoque cualitativo las funciones que desempeñamos once investigadores en proyectos transdisciplinarios localizados en Latinoamérica. Basándonos en una encuesta en línea realizada por el equipo de investigación para sistematizar nuestras reflexiones sobre nuestras experiencias exploramos los retos que enfrentamos al adoptar múltiples roles en este tipo de investigación, tales como la inversión de mayor tiempo en la gestión, la necesidad de mayor respaldo institucional y financiamiento, y la mediación de las diferencias epistemológicas, de comunicación y de agenda entre nosotros como investigadores y las partes interesadas. Finalmente, comparamos nuestros hallazgos con la literatura existente, destacando algunas similitudes, diferencias, desafíos y oportunidades que

vislumbramos y que consideramos que podrían contribuir al diálogo sobre la transdisciplinariedad entre el Norte Global y Latinoamérica.

Palabras clave: coproducción de conocimiento; integración de conocimiento; participación; papel de investigadores; sostenibilidad; activismo académico; investigación-acción participativa

Introduction

Transdisciplinary research is increasingly valued as a key approach to fostering sustainable transformations through the co-production and integration of knowledge. Transdisciplinarity constitutes a research approach that integrates different types of knowledge, promoting collaboration between different actors across academia and other sectors (Jahn et al., 2012; Lang et al., 2012). In recent decades, the transdisciplinary approach has been considered appropriate for solving complex problems (for example social-ecological issues) and has therefore underpinned research and projects on sustainability science and environmental management (Ortega-Uribe et al., 2014; Aparicio et al., 2024).

The co-production and integration of knowledge require different skills from researchers beyond the traditional role as outside neutral observers. The researcher's role is associated with their "positionality", which, according to Bourke (2014), refers to their point of view and worldview. According to this author, positionality recognizes that the researcher's background, experiences, values, and social identities, as well as the social and political context in which they live, influence the research process. This assumes that researchers are not neutral observers, but rather approach research with their own perspectives, biases, and even their involvement in power dynamics, all of which can influence research design, data collection, analysis, and interpretation, and, consequently, the very generation of knowledge (England, 1994; Bourke, 2014). The complexity of current social-ecological problems requires changes in our roles as researchers, so that we can collaborate more effectively with other actors to effectively solving problems and contributing to transformative change (Trimble et al., 2014; Knapp et al., 2019; Minna et al., 2024; IPBES, 2024). The roles of the transdisciplinary researcher have been reflected in the academic scholarship; however, the majority of approaches and research stem from researchers in the Global North (Crouzat et al., 2018; Fazey et al., 2018; Hilger et al., Hofmann et al., 2025, Pielke, 2007; Pohl et al., 2010; Turnhout et al., 2013; Vinke-de Kruijf et al., 2022, Wittmayer & Schäpke, 2014; Busse et al., 2026).

Though, when viewed through a political ecology lens, there are differences between research in the Global North and the Global South (Martínez-Alier, 2014; Leff, 2017, Prieto, 2023). Research in the Global South often faces issues of exclusion, marginalization and power relations in publishing, knowledge production and access to financial resources. Environmental defenders and local community leaders are

experiencing high levels of criminalization and violence which often limit their ability to engage in academic processes. Additionally, transdisciplinary research in the Global South implies adopting intersectional approaches that recognize the links between gender, race, ethnicity and social classes in social-environmental processes. In this regard, Merçon (2022) conducted a critical review of research approaches in Latin America, highlighting shared contributions such as questioning the status quo through the analysis of power relations in research systems; the generation and validation of knowledge; and the contribution of asymmetrical (top-down) relationships to inequalities through the exploitation of people and nature. Among these approaches, the author mentions critical pedagogy and popular education (Freire, 1996), research on traditional agricultural technology (Ortega-Paczka, 2013), community development (Moreno, 2013; Macías, 2013), decolonial thought (Hill et al., 2023; Soares et al., 2023), and epistemologies of the South (Rivera Cusicanqui, 2010).

One particularly influential approach that has also emerged from Latin America is Participatory Action Research (PAR), a methodological approach that, through cycles of reflection and action, involves participants as active researchers in all stages of the research process – design, data collection, analysis – and, as the name suggests, entails action (Zapata & Rondán, 2016). Its objective is to understand and solve real-world problems, promoting social transformation (Pérez-Alva, 2022). It fosters a horizontal relationship in which popular knowledge and other types of knowledge are as valuable as scientific knowledge (Oliveira, 2015). It is characterized by its political and ethical commitment to addressing problems that affect marginalized and excluded groups (Fals Borda, 1970; Balcazar, 2003). This approach seeks to empower participants to solve their own problems and build knowledge relevant to their social contexts (Baum et al., 2006). While this literature from the Global South foregrounds shared political and epistemological commitments, it offers less in terms of a systematic typology of the specific roles researchers occupy (e.g., activist, facilitator, broker) in transdisciplinary practice. This gap is one that this paper seeks to address through a reflexive account of our own practice.

During the Panel “Transdisciplinary research and the commons: addressing communication and worldviews gaps between academia and local communities in Latin America” at the International Association for the Study of the Commons (IASC) conference, held at the University of Massachusetts, Amherst (and online) from June 16-20, 2025, all co-authors participated as presenters. During the discussion, the question of our roles as researchers arose: in an era of increasing transdisciplinarity, how do we live and navigate these multiple roles of being researcher, activist, and facilitator of collaboration, synergies, and networks? What challenges does this redefinition of roles pose? We began exploring these questions during the panel and continued reflecting on them throughout the writing of this

paper, drawing on a self-administered online survey to systematically document and analyse our reflections.

This article analyses the roles researchers play in transdisciplinary projects involving urban and rural settings in several Latin American countries. Specifically, we address the following research questions: 1) What is our role as researchers working in transdisciplinary projects in Latin America? 2) In case of assuming different roles, how do we handle this challenge?

Firstly, we provide some theoretical background on the roles of researchers. Secondly, based on reflections derived from our own experiences we explore our roles and the challenges faced when adopting multiple roles in transdisciplinary research. Finally, we discuss our findings in relation to existing literature, highlighting some similarities, differences, challenges, and opportunities that contribute to the dialogue on transdisciplinarity between the Global North and Latin America.

Theoretical background

When reviewing existing literature, there are several typologies on the role of researchers in transdisciplinary projects. Pielke (2007) focuses on the interaction of researchers and policymakers. In his typology, he differentiates among several ideal types of researchers: the *pure scientist*, who remains largely detached from politics and decision-making; the *science arbiter*, who provides advice to decision-makers, for instance through expert advisory committees; the *issue advocate*, who actively engages in societal debates; and the *honest broker of policy alternatives*, who helps clarify the range of possible actions. In addition, he identifies a fifth type, the *stealth issue advocate*, who primarily seeks to advance knowledge while claiming to remain disconnected from decision-making. Crouzat et al. (2018) expanded Pielke's typology by adding a sixth type of researcher: the *officer* who seeks to use environmental science within policy processes.

Other typologies define researcher roles based on knowledge co-production processes between researchers and other societal stakeholders. Pohl et al. (2010) examined researchers' roles in knowledge co-production, focusing on power relations, the integration of diverse perspectives, and communication. From a comparative study, they identified three roles: the *reflective scientist*, who provides expertise while recognizing power dynamics; the *intermediary*, who synthesizes shared perspectives across groups; and the *facilitator*, who supports effective communication. Turnhout et al. (2013) combine the intermediating and facilitating functions into the role of the *knowledge broker*, who provides relevant expertise, connects knowledge producers and users, and supports the integration of knowledge to develop practical solutions. Wittmayer and Schäpke (2014) extended Pohl et al.'s (2010) typology for sustainability-oriented projects, emphasizing researchers' active roles in fostering spaces for societal learning. Beyond power and sustainability, they

highlight ownership, action, and reflexivity, adding two roles: the *change agent*, who motivates and empowers participants to address real-world problems, and the *self-reflexive scientist*, who reflects on normative positions and power dynamics. Fazey et al. (2018) further expanded this framework to include the *learning expert*, who supports others in improving learning processes, and the *reflexive facilitator*, who promotes reflexivity by acting as a critical partner.

Vinke-de Kruijf et al. (2022) aggregate the existing researcher roles into six types: 1) stealth issue advocate/pure scientist, 2) science arbiter, 3) issue advocate/ honest broker/officer, 4) reflective scientist/self-reflexive scientist, 5) reflexive facilitator/change agent, and 6) intermediary/knowledge broker/expert in learning/process facilitator. They locate these roles in three overlapping spaces (knowledge space, formal policy space, and stakeholder space). After reflecting on their experiences in transdisciplinary environmental management projects, the authors conclude that the existing researcher role typologies do not fully capture the challenges of transdisciplinary environmental management projects because they overlook either the stakeholder or the policy space. In consequence, they establish three categories of researchers: *knowledge-oriented researchers*, who focus on scientific understanding while being aware of policy and stakeholder contexts; *change-oriented researchers*, who combine knowledge production with efforts to influence policy and societal change; and *intermediating researchers*, who integrate scientific knowledge with diverse knowledge sources. These roles are dynamic, and individuals often shift between or combine roles over time and depending on the context, although this may entail tensions (Hofman et al. 2025). Therefore, positionality is not fixed - it largely depends on where in the policy process researchers plug into - nor is the way (tools) a researcher or a team of researchers engages with complex problems.

To refine researcher roles, Hilger et al. (2021) developed 15 researcher roles in transdisciplinary research (choreographer, facilitator, intermediary, knowledge collector, knowledge co-producer, field expert, data supplier, results disseminator, communicator, practice expert, scientific analyst, self-reflexive participant, coordinator, application expert, troublemaker) in transdisciplinary research, based on an extensive review of their activities and grouped into four activity domains: the field, academia, boundary management, and knowledge co-production.

For developing a robust tool to measure research roles, Hofman et al. (2025) agreed on six roles based on the existing typologies: 1) traditional scientist, 2) self-reflexive scientist, 3) knowledge integrator, 4) knowledge broker, 5) process facilitator, and 6) change agent. The roles are defined by three typical researcher tasks each.

Thus, many of the reflections on transdisciplinary research have emerged out of the Global North and centred on defining typologies. In this paper, by contrast, we reflect on our own experience to explore our practice, positioning, and the challenges

we face in the various roles we play as transdisciplinary researchers with projects located primarily in Latin America.

Methodology

To guide our collective reflection process on researcher roles, we, as researchers working in transdisciplinary projects in Latin America, developed a short online survey (see Appendix 1) for self-reflection, drawing on studies of researcher roles by Vinke-de Kruijf et al. (2022) and Hofmann et al. (2025). Vinke-de Kruijf et al. (2022) discussed the knowledge co-production challenges associated with different researcher roles. As one of their results, they provided a checklist as guidance for researchers to reflect upon the suitability of their roles, asking about the researchers' orientation, norms and values, expectations, and resources. We adapted the reflective checklist into our online survey with questions 10, 17, 15, 19, and 23. Also, when asking about the specific roles people adopt as researchers in their projects (question 11), we took as our starting point the roles Vinke-de Kruijf et al. (2022) positioned in formal policy, stakeholder, and knowledge spaces, as the roles were based on the revised concepts of researcher roles (Crouzat et al., 2018; Fazey et al., 2018; Pielke, 2007; Pohl et al., 2010; Turnhout et al., 2013; Wittmayer & Schäpke, 2014).

Furthermore, we replicated the reflection tool that Hofmann et al. (2025) developed for researchers in inter-and transdisciplinary projects. While the original tool consists of (1) a researcher survey that operationalizes six prominent roles (traditional scientist, self-reflexive scientist, knowledge integrator, knowledge broker, process facilitator, and change agent), (2) a visualization of role profiles from the survey, and (3) a set of reflection questions on related opportunities, challenges, and coping strategies on individual and project level, we replicated the role survey in question 12 in our online survey, to identify the six researcher roles proposed by Hofmann et al. (2025) which are operationalized by three typical tasks each. We adapted the weighting for each task to 1= totally agree to 7= totally disagree, instead of scoring from 0 (= role not assumed) to 3 (= role fully assumed). We skipped step 2, but also integrated reflective questions about our work in the survey. The survey was conducted between November 20, 2025, and January 15, 2026. All ten co-authors of this paper that were present in the IASC panel, completed the questionnaire.

We are ten researchers who participate in transdisciplinary projects. All of us work in academia, three additionally in civil society organisations, and one in government. Our projects have taken place in Brazil, Colombia, Costa Rica, Ecuador, Mexico, Peru, and Uruguay, and focus on a wide range of topics. Topics include the governance of the commons (e.g. water, fisheries, forests), the conservation and restoration of social-ecological systems, agroecology, food systems, environmental justice, climate resilience, social well-being, health, and data science. The contexts in

which our research is conducted are often characterised by structural inequities, where social-environmental problems disproportionately affect communities with limited resources to address them. We aim to change or transform these contexts through transdisciplinary projects.

The survey combined open- and closed-ended questions covering seven themes: (1) understandings of transdisciplinary research; (2) researcher roles; (3) project contexts and enabling conditions; (4) reactions from immediate institutional environments; (5) researcher positionality; (6) challenges and opportunities associated with multiple roles; and (7) the availability of funding, skills, and knowledge required to conduct transdisciplinary research.

After data collection, the results were analysed using descriptive frequency measures for the closed questions. Given the exploratory and reflective nature of this study, responses to the open-ended questions were not subjected to formal qualitative coding. Instead, they were used as points of reference to summarize the main ideas for the results section. The overall results were further discussed and reflected among the co-authors during the writing process of this article.

Results

Our Experiences in Transdisciplinary Projects

We understand a transdisciplinary project as a collaborative research and action process aimed at understanding and addressing complex, real-world problems, integrating and articulating diverse actors, perspectives, and types of knowledge, both academic and non-academic, to generate new, context-specific knowledge and support collective action. Such projects are interdisciplinary and can involve a diversity of actors, such as academics, communities, civil society organizations, institutional actors, and other relevant stakeholders - ideally from problem definition and research design through data collection, analysis, reflection, and dissemination of results. Transdisciplinary projects respond to real-life challenges and locally defined needs - in our cases, social-environmental issues, with the goal of enabling understanding, collective decision-making, and transformative action. Knowledge is co-produced amongst the involved actors in a horizontal dialog, whereby scientific knowledge, practical expertise, community knowledge, and lived experience are of equal importance. Consequently, the projects need to address power asymmetries, promote participation, and pursue the democratization of knowledge and mutual learning. To achieve these goals, transdisciplinary projects integrate participatory and collaborative methodologies such as participatory action research, participatory mapping, social cartography, counter-mapping, community monitoring, and co-

constructed narratives to enable effective communication among heterogeneous groups.

Our experiences with transdisciplinary projects to date have been mixed with regard to knowledge co-production. We find that community members are often open, curious, and willing to participate, though some initial resistance may arise when co-production of knowledge is proposed - particularly when local knowledge is positioned as equivalent to scientific knowledge and when objectives and methods are negotiated rather than predefined. However, in many places, there remains inertia toward consultative, top-down models, in which academics are expected to define problems and solutions. We also have had positive experiences with collaboration with civil society organizations, especially those engaged in Indigenous self-determination and territorial defence, who prompt us researchers to listen more deeply, adapt rhythms and perspectives, and critically reflect on how academic knowledge is produced. Institutional and state actors, in contrast, have often shown hesitation toward open-ended, participatory processes, maintaining implicit expectations of vertical knowledge transfer and traditional linear, short-term interventions, despite expressed interest in more meaningful collaboration.

In our academic and institutional settings, reactions to our transdisciplinary projects have been mixed. Some academic colleagues and research groups are highly supportive and curious, while others are sceptical or condescending, particularly in more traditional disciplines. Resistance often stems from perceptions that transdisciplinary work is impractical, overly time-consuming, and insufficiently structured, and that it requires long-term engagement with non-academic, often politicized actors. Therefore, it is helpful that we can rely on strong support networks of like-minded colleagues, NGOs, and emerging academic communities where transdisciplinary work is fostered (e.g. Society for Social-Ecological Systems - SocSES, Equity and Access in Algorithms, Mechanisms, and Optimization - EAAMO). This was also the reason to found the Participatory Research Network in Latin America (Red IPAL) back in 2021.

These networks support a changing attitude toward transdisciplinary research through increased academic literature, conferences, and funding calls, particularly since about 2015. One example is EAAMO, which demonstrated that technical excellence could coexist with deep community collaboration, catalysing personal and institutional transformation. This momentum also led to the creation of new academic spaces, such as the *International Science Summer*, which provides Indigenous women researchers in Mexico with legitimate, high-level platforms to conduct and present transdisciplinary work.

In general, we sense a gradual shift toward greater openness to transdisciplinary research. Across academic and civil society there is growing awareness of the importance of transdisciplinary research for sustainability and complex problem-solving. While institutional and state-level support has evolved slowly, the change is

noticeable. Funding calls increasingly emphasize participatory, locally grounded projects, reflecting a broader recognition that communities directly affected by social-environmental challenges hold essential knowledge. Additionally, universities and research institutions exhibit increased receptivity, with greater recognition, funding opportunities, and support mechanisms for transdisciplinary work. However, in some cases, researcher engagement remains superficial, with limited presence in territories or dialogue among knowledge systems, despite increased training and discourse around transdisciplinarity. And still, traditional scientific research remains the most highly valued within academic evaluation systems.

Our Roles in Transdisciplinary Projects

When considering our different researcher roles, we primarily identify ourselves as process facilitators, followed by knowledge brokers and knowledge integrators. Naturally, as authors of this reflexive paper on our transdisciplinary work, we also see ourselves as reflective researchers. By contrast, we identify less strongly with the roles of traditional researchers or change agents.

We often perceive our primary role as that of an intermediary integrating multiple sources and types of knowledge to support decision-making processes. This is followed by a knowledge-oriented role, in which we provide decision-makers and other stakeholders with relevant, objective, scientific knowledge, and a change-oriented role through which we seek to contribute to and promote societal change.

According to Hoffman et al. (2025), the main task shared by all of us is bridging different types of knowledge while providing space for critical reflection and deliberation. Other key tasks include identifying and connecting relevant actors from science, policy, practice, and the public; translating, interpreting, adapting and tailoring different types of knowledge to diverse audiences; initiating and facilitating learning processes or experiments within project teams and with external actors; organizing and preparing workshops; selecting and inviting actors (from science, policy, practice, and/or the public); and consolidating project outcomes. These tasks strongly reflect our roles as knowledge brokers and process facilitators. At the same time, we also engage in strategic networking with actors from science, policy, practice, and the public to support change processes, thereby acting as change agents. We conduct or supervise systematic analyses of complex problems and potential solutions, reflecting the role of traditional scientists, while also observing and critically reflecting on research practices and our own normative orientations in relation to project goals as reflective scientists. Finally, we also fulfil, at least in part, the role of knowledge integrators by synthesizing knowledge across disciplines and fields, generating new integrated knowledge, designing, planning, monitoring,

assessing, and evaluating integrative processes and their outcomes and crossing or bridging disciplinary boundaries.

Reflecting on our different roles and tasks, we found it difficult to provide a single characterization because our contributions vary across projects. In some projects, we contribute primarily through scientific expertise, whereas in others we focus more on facilitation and knowledge integration. This variability reflects the complexity of transdisciplinary research, in which these roles do not occur in isolation, but rather function as complementary responsibilities that are activated according to the project's stage and the needs of the communities with which we collaborate. Consequently, we move continuously between multiple roles. At the same time, we still consider ourselves traditional researchers insofar as we work within an academic system in which publications remain the primary incentive and the dominant criterion for evaluation. Assuming multiple roles in transdisciplinary research projects is a constant challenge. It requires balancing diverse responsibilities while striving to fulfil each with the expected depth and quality. Moreover, these roles are not fixed within a single project but often shift in response to the group dynamics, the project's stage, and individual circumstances. Institutional pressures - especially those related to academic publications, rankings, and university recognition - frequently create stress and may at times displace essential participatory research practices, generating tensions with local stakeholders. Additional constraints include limited funding, marginal recognition of transdisciplinary initiatives within universities or research institutions, and the emotional and time demands associated with meeting diverse, sometimes conflicting, expectations.

At the same time, embracing multiple roles offer important advantages. It enables researchers to build legitimacy beyond academic credentials, develop a deeper understanding of diverse perspectives, and act as mediators across different knowledge systems, temporalities, and stakeholder groups. Although leading knowledge-integration processes can be challenging and does not always lead to successful outcomes, it is also highly creative and intellectually rewarding. Transdisciplinary projects create opportunities for continuous learning and give research a social purpose that is difficult to achieve through strictly disciplinary approaches. Their success depends on collective efforts, recognizing individual strengths and limitations, assembling complementary research teams, promoting effective communication tools within research teams, and developing reflective and self-care practices that support sustained engagement in this demanding yet rewarding form of research, even amid stress and feelings of being overwhelmed.

Self-awareness

As we are self-reflective, we are aware of our norms and values, that is, about our personal opinions about our research topics, how our own values and norms

influence our decisions during the research process, and the potential societal impact of our research, including the political and societal values and norms that play a role (see Box 1). The four cases presented in Box 1 illustrate distinct but interrelated dimensions of this self-awareness. The first example shows how the everyday seemingly minor decisions of researchers, such as which stakeholders to connect with funding or visibility opportunities, carry redistributive implications and reflect an underlying commitment to social justice. The second and third example demonstrate a more open form of positionality, where the researcher's explicit articulation of a normative stance (such as prioritizing community survival over strict conservation) exposes the tension between scientific neutrality and advocacy that characterizes much transdisciplinary work. The fourth example foregrounds a different kind of reflexivity: the ongoing negotiation of whether collaboration with state actors' risks legitimizing extractive agendas, even as the researcher opts for pragmatic engagement over paralysis. Taken together, these cases suggest that self-awareness in transdisciplinary research is not a single, static competency but a recurring practice that manifests differently depending on the stakes, audience, and power asymmetries involved in each interaction. However, we sometimes fall into misconceptions, e.g. not always being aware of how our norms inherited from the Global North influence on our research when living as a foreigner for a long time in a country in the Global South, and vice versa.

Box 1: Examples of self-awareness in transdisciplinary projects

“For example, in transdisciplinary projects on artisanal fishing in Uruguay, I am aware that it is necessary to develop actions in a collective manner to move towards a better future for this sector. It is not only fishermen and fisherwomen with greater economic and social capital who should be involved in these actions, which is why we try to address different realities and situations (greater social justice is needed). As an example, a recent case comes to mind: authorities from the institution in charge of fisheries management in Uruguay asked me if I could recommend a business to provide catering services (with seafood tastings) at an event celebrating the World Fisheries Day. I shared a map with them showing all the businesses (local initiatives) run by artisanal fishers in Uruguay (the result of a master's thesis that is in its final stages) and suggested they contact a business run by a fisherwoman in Montevideo (where the event was to be held), which is not very well known (unlike others that are well known and have more contacts, etc.). I was aware of the recommendation I was making and its implications. On the day of the event, I was very happy to see that this had come to fruition and that the fisherwoman, with whom we have collaborated on a couple of projects, was delighted to be offering (for the first time) products made at her beach bar (based

on local fish and seafood) to many people and officials from the Ministry of Livestock, Agriculture and Fisheries.”

“Example of being aware of personal opinions on the research topic: During a public plenary session with multiple and diverse stakeholders, I made my opinion on the issue clear through my interventions. It was a project on the governance of aquatic commons for the environmental sustainability of a region declared as a strict conservation area. In one of the projects, I stated that although I considered the conservation of natural resources to be important, I believed that an environmental conservation policy should take into account the economic dilemma faced by local communities, their need to exploit resources in order to survive, and allow them to do so. I argued that certain conservationist policies threaten the survival of local communities and open up opportunities for exploitation by actors with greater economic and political power.”

“The example of being aware of the possible repercussions of my research on society: In writing a non-academic publication in which I was asked to express the results of my research, I told the story of how self-organised communities have been able to overcome social-ecological problems that neither the state nor private entities have been able to solve, and therefore research such as mine demonstrated the importance of incorporating other ways of understanding the world, but that this work required re-evaluating the values that society defends and offering normative tools for change.”

“In an experience on capacity building for water management, I wondered whether collaborating with the public sector implied legitimising or supporting in some way a government with a clearly extractive agenda, but I preferred action over the paralysis that comes with waiting for conditions to be favourable. This created a need to constantly reflect with partners from other disciplines on the broader objectives of the collaboration, which did not lead to any clear agreement, but did lead to the recognition that we can make progress on a limited objective (improving capacities to design and implement collaborative watershed management processes) without being held back by differences in perceptions of the overall direction of public policy or ideologies. Values and norms influence everything at all times. In the initiative referred to, I sought, despite resistance from some collaborators, to ensure that decisions were made in a participatory way, but it was very difficult to change the demand for a more vertical contribution from academia.”

We adequately inform our collaborators and stakeholders about the objectives and orientation of our research project and the potential impacts of our research projects. This includes constant communication with the stakeholders throughout the project, not only in the beginning, as well as the necessity to explain the nature of a transdisciplinary project, especially the form of cooperation, on several occasions and in various ways, although sometimes it is time itself and the facts themselves that show how collaboration works. The challenge of communication has always been one that does not have a single solution and cannot be resolved in a single moment; it requires constant work and collective commitment to be effective. Some projects are very short and do not offer enough time to generate that type of communication. Sometimes communication has been impossible due to cultural and language barriers. In other cases, the team of researchers hired has little time, and interest in fully understanding the work context, which makes communication impossible and limits the building of trust and more intimate relationships, such as empathy, affection, care, etc. among the actors. Some difficulties arise in aligning calendars, administrative requirements, travel logistics, and academic processes at host institutions.

Besides communication, expectation management is also a common challenge. Most actors think that social transformation can be designed and that it can be relatively conflict-free, when in reality the situation is very different due to the influence of existing structures at all levels. Furthermore, it is sometimes difficult to convey the potential for action, considering the timing of research funding, academic schedules, and the schedules of communities or collaborative groups. It is also important to clearly communicate the potential scope of action. Sometimes, community collaborators assign certain tasks to academics that we cannot always perform, or that are beyond our own skills or capabilities. For example, when working with government sectors, staff turnover can be exhausting and a serious hurdle for continuing with processes in the same way. Another challenge is that not all the actors who participate in a project are fully committed to transdisciplinarity, and at times their behaviour reflects an expectation of verticality in the transfer of knowledge. The shared construction of knowledge sounded good, but the time demands it entailed were not compatible with the availability of various actors, both at the community level and in the public sector.

Resources Availability

We generally have access to financial resources to conduct transdisciplinary projects, as most of them are third-party funded projects financed by national governments or international funding schemes. We also primarily receive institutional support, e.g., from our universities and research institutes for the

dissemination of results and access to facilities, and from local and regional government institutions, e.g., to convene and organize multi-actor workshops. The network of Consejos y Organismos Estatales de Ciencia y Tecnología in Mexico, for instance, became a key partner in ensuring institutional viability, visibility, and coordination, as well as connecting students, academic institutions, and communities in some of our projects. Besides this support, the project rules themselves are often quite restrictive to be adjusted in terms of content and timelines, which is less supportive. In this sense, some experiences highlight the fundamental contribution of in-kind funding that local partners and experts provide to this type of research. We sense that, regarding capacities and skills (e.g., research, organizational, communication) to fulfil our required role(s), the situation could improve, as only in half of our projects we feel these are sufficient. This includes sufficient leadership skills to manage a project, facilitation skills, experience in project facilitation, conflict resolution, and community environmental education, technical knowledge for knowledge integration, comparative analysis, and synthesis. Sometimes it is necessary to reach out to the work team or other allied people if some skills or capacities are missing. Also, attending leadership training courses, relying on more experienced colleagues, engaging in self-reflection, and learning from mistakes in order to grow, help to deal with these challenges. Finally, acquiring capacities and skills for transdisciplinary projects is a continuous learning-by-doing process.

In sum, transdisciplinary research still poses major challenges, for example in terms of practising self-observation by all participants (local and external experts, scientists, etc.). It also presents a great opportunity to re-evaluate different types of knowledge, understandings and worldviews, to encourage collaborative and collective intelligence for the construction of new knowledge and the search for negotiated, resilient or ‘tailor-made’ solutions to the complex problems of the times and contexts in which we live.

Discussion and Conclusion

Our self-reflection on researchers’ roles in transdisciplinary projects confirms findings from previous studies. We found it difficult to distinguish among different roles and activities we perform because we engage in most of them, albeit at different stages of a project and across different projects (Vinke-deKruif, 2022; Hofmann et al., 2025). This reflects the fluidity and flexibility of researchers’ roles in transdisciplinary research (Arnold, 2021).

Following Vinke-de Kruif et al. (2022), we primarily identify as intermediating researchers who seek to combine the production of scientific knowledge with the integration of multiple knowledge sources and types. This combination is inherently challenging, particularly when balancing time-intensive mediation tasks with scientific knowledge production, addressing potential gaps in facilitation skill for

knowledge co-production, and navigating decision-making processes shaped by unequal power relations. We are aware of these challenges and our main coping strategies involve relying on the complementary expertise of our research teams and seeking advice from experienced colleagues. Our effectiveness could be further enhanced by outsourcing specific facilitation tasks, as well as activities related to fundraising and project administration. Equally important is strengthening the capacities of local transdisciplinary teams, local researchers, and co-investigators without formal scientific training, enabling them to assume greater responsibilities throughout the research process.

We also believe it is essential to recognize and revalue the contributions of co-researchers and local stakeholders, including *ejidos*, communities, and civil society organizations, to transdisciplinary projects and research. These contributions are frequently overlooked or, at best, acknowledged only as in-kind contributions from local counterparts. Such contributions include providing time, local knowledge, protection, testimonies, physical labour, access and guidance to community spaces and territories, accommodation, and logistical support. Without these often invisible forms of collaboration, transdisciplinary research would simply not be possible.

As knowledge brokers/process facilitators we primarily operate at the interface between the stakeholder and knowledge spaces, while as reflective scientists and pure scientists we work predominantly within the knowledge space (Vinke-deKruif, 2022). This positioning implies that in our transdisciplinary projects to date our engagement with the policy space has been relatively limited. One reason is that e.g., when accompanying processes of territorial defence characterized by structural inequalities and significant political, social, and economic asymmetries, we intentionally position ourselves within the knowledge spaces to support and strengthen local struggles. This approach seeks to avoid occupying centre stage or monopolising spaces for discussion, instead creating opportunities for those most directly affected to lead these conversations and, in doing so, partially rebalance existing political and epistemic power relations.

Another explanation based on our experience in Ecuador, is that the policy space often has limited demand for robust scientific evidence. Most actors within the policy space participate primarily to pursue political objectives rather than policy agendas reducing the potential influence of research-based knowledge on decision-making. Furthermore, many policy actors lack the training needed to engage with scientific outputs, even when these are specifically designed for non-academic audiences through science communication approaches. This limitation is closely linked to broader weaknesses in educational systems, especially when working in local policy spaces (municipalities or small regions). A more theoretically and empirically grounded explanation, supported by studies from several countries in Latin America, is that most policy subsystems in the region are highly polarized; therefore, they

provide limited space for specialized knowledge to shape policy debates. In addition, transdisciplinary projects may be perceived as unattractive by some political actors because they do not necessarily generate immediate political support and often challenge entrenched political practices, including clientelistic forms of reciprocal exchange that continue to characterize politics in parts of the region.

Our findings also suggest that academic institutions and state funding programmes provide similarly limited support for transdisciplinary research. Consequently, differences in the implementation of transdisciplinary projects may depend more on broader contextual conditions and less on researchers' individual roles or the availability of formal training at undergraduate and postgraduate level. This opens space for future research on how transdisciplinary research is conducted in Latin America, and how these conditions differ from those in other world regions, e.g. working with stakeholders from different ethnic groups and with different worldviews. In Latin America, transdisciplinary research is generally embedded within contexts characterized by ethnic diversity, interculturality and decoloniality, dimensions that are often less prominent in Global North settings. Researchers also work within contexts of weak public policies in the social and environmental sectors and potential human and nature rights violations - Latin America is the most dangerous region for environmental defenders. These conditions inevitably shape both research practices and stakeholders' expectations of scientists and academic institutions. From the perspective of political ecology, scholars such as Martínez-Alier (2014), Leff (2017), and Prieto (2023), have highlighted important differences between research conducted in the Global North and Global South. They argue that Southern research is often motivated by the revaluation of local knowledge systems and situated forms of wisdom as part of broader decolonial efforts to advance environmental justice and challenge extractivist models centred on the export of natural resources.

Another possible explanation for our findings lies in the characteristics of our own research team. All of us have maintained fluid professional relationships with institutions and research communities in both the Global North and South, although our disciplinary backgrounds differ considerably. Several of us have been educated and have worked in both contexts. Despite these differences, we are predominantly mid-career researchers with substantial experience in transdisciplinary sustainability research, which may have influenced our perspectives and therefore introduced a degree of sampling bias.

Given these limitations, we believe that the next step should be to administer a refined version of our survey to a larger group of academics involved in transdisciplinary sustainability projects across Latin America, while also including participants from the stakeholder space, such as co-researchers or local researchers. This so far has been done only by Busse et al. (2026) who analysed the role of scientists and farmers and their interactions in a transdisciplinary landscape living lab

project. We further propose integrating a Global South perspective into the data collection instrument and complementing the survey with a more in-depth qualitative analysis of participants' testimonies, supported by focus groups and in-depth interviews. Throughout this research process, additional questions also emerged that warrant further investigation, including the pedagogical challenges of teaching transdisciplinarity to diverse student populations and preparing future generations of transdisciplinary researchers.

As a result of this collective reflection, we conclude by articulating our positionality in transdisciplinary sustainability research projects. We are a group of researchers aware of our privileges such as academic status, race, class, nationality, gender, and institutional affiliation, and the social, cultural, and epistemic distance between ourselves and the communities we work with. We believe that transdisciplinary research should foster horizontal dialogue, justice, and the recognition of local, Indigenous, and experiential knowledge as equally valuable alongside scientific knowledge. For us, inclusion is not only methodologically enriching, but an act of justice. We see ourselves as translators between knowledge systems and learners alongside communities, rather than as external experts who solve problems for others. We understand learning as a mutual, ongoing, and transformative process that requires humility, openness, and constant self-assessment. Consequently, we see the need to reflect on how assumptions change through practice over time. Although we employ scientific methods and evidence to support our arguments, we seek to situate them alongside, rather than above, other ways of knowing to foster a plurality of worldviews. We continuously navigate tensions between academic expectations, including publications, timelines, and institutional performance metrics and the slower, adaptive rhythms required for meaningful transdisciplinary engagement with communities and territories. In doing so, we aspire both to critique academia from within and to contribute to its transformation through transdisciplinary practice.

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Appendix 1

Questionario Rol de investigador@s en proyectos transdisciplinarios

Bloque A: Investigación transdisciplinaria

1. ¿Participa Ud. en proyectos transdisciplinarios?
 - a) Sí
 - b) No
 - c) No lo sé
2. ¿Cómo define Ud. a un proyecto transdisciplinario?
3. ¿En qué país(es) de América Latina desarrolla/ó su proyecto?
 - d) Argentina
 - e) Bolivia
 - f) Brazil
 - g) Chile
 - h) Colombia
 - i) Costa Rica
 - j) Cuba
 - k) Ecuador
 - l) El Salvador
 - m) Guatemala
 - n) Honduras
 - o) México
 - p) Nicaragua
 - q) Panamá
 - r) Paraguay
 - s) Perú
 - t) Puerto Rico
 - u) República Dominicana
 - v) Uruguay

- w) Venezuela
- x) Otro: _____
- 4. ¿En qué situaciones (contexto) ha decidido investigar de manera transdisciplinaria?
- 5. ¿En qué sector desarrolla su actividad principal?
 - a) Academia
 - b) Organización de la sociedad civil
 - c) Gobierno
 - d) Empresa privada
 - e) Otro: _____
- 6. ¿Cuál es la temática que aborda(n) su(s) proyecto(s)?
- 7. Comente, ¿de qué manera el entorno (sus colegas, grupo, organización, institución, red, familia, amistades, etc.) al que Ud. pertenece ha reaccionado o respondido cuando Ud. propuso o realizó investigación transdisciplinaria?
- 8. De acuerdo a la respuesta a la pregunta anterior, ¿siempre ha sido así, o considera que se han registrado cambios? En caso de que haya habido cambios, descríbalos y explique a qué los atribuye.
- 9. Describa de manera general su posicionalidad respecto a los proyectos transdisciplinarios.

Entendemos la posicionalidad como "el punto de vista y la visión del mundo del investigador, reconociendo cómo sus antecedentes, experiencias e identidades sociales influyen en su proceso de investigación. Se trata de reconocer que los investigadores no son observadores neutrales, sino que llegan a la investigación con sus propias perspectivas y sesgos, que pueden influir en el diseño de la investigación, la recopilación de datos, su análisis e interpretación" (Bourke, 2014), así como en la manera en que generan conocimientos y colaboran con otros actores para este fin.

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Bloque B: Rol como investigador/a

- 10. En sus proyectos transdisciplinarios, su función principal como investigador/a es (puede seleccionar una o más opciones):
 - a) Proporcionar a los responsables de la toma de decisiones y a otras partes interesadas conocimientos científicos relevantes y objetivos (orientado al conocimiento)
 - b) Ser influyente y promover el cambio social (orientado al cambio)
 - c) Integrar múltiples fuentes y tipos de conocimiento en apoyo del proceso de toma de decisiones (intermediación).
 - d) Otro:
- 11. ¿Se considera Ud. más (tenga en cuenta que 1 equivale a "totalmente de acuerdo" y 7 equivale a "en desacuerdo definitivo")?:

- a) Investigador/a tradicional (Investigador/a reflexivo)
- b) Investigador/a autorreflexivo
- c) Integrador/a de conocimientos
- d) Agente de conocimiento (knowledge broker)
- e) Facilitador/a de procesos
- f) Agente de cambio
- g) Otro: _____

12. En sus proyectos transdisciplinarios, ¿cuál(es) de las siguientes actividades está realizando? (puede seleccionar una o más opciones):

	Sí	No	No sabe
a) Desglosar problemas complejos en partes solucionables (por ejemplo, aplicando conceptos y teorías científicas).			
b) Realizar o supervisar la realización de análisis sistemáticos de problemas desglosados y posibles soluciones (por ejemplo, utilizando métodos cuantitativos y/o cualitativos).			
c) Comunicar conocimientos científicos validados como intersubjetivos por la disciplina correspondiente.			
d) Observar y reflexionar sobre las prácticas de investigación (por ejemplo, escribiendo protocolos de observación o diarios de investigación).			
e) Reflexionar críticamente sobre las dinámicas de poder internas y externas que dan forma al proyecto (por ejemplo, identificando jerarquías y diferencias en la dotación de recursos).			
f) Reflexionar críticamente sobre la propia orientación normativa en relación con los objetivos del proyecto (por ejemplo, reflexionando sobre las propias motivaciones personales, actitudes y preferencias políticas).			
g) Identificar y conectar a los actores relevantes del ámbito científico, político, práctico y/o público (por ejemplo, comprender el panorama de los actores, identificar y mediar entre diferentes perspectivas).			

h) Tender puentes entre diferentes tipos de conocimiento (por ejemplo, haciendo que el conocimiento científico sea accesible para diferentes públicos objetivo y/o integrando el conocimiento de la política, la práctica y/o el público en el proceso científico).			
i) Traducir, interpretar, adaptar y ajustar diferentes tipos de conocimiento a diferentes públicos objetivo (por ejemplo, encontrando combinaciones realistas de problemas y soluciones).			
j) Establecer redes estratégicas con actores del ámbito científico, político, práctico y/o público en el contexto de los procesos de cambio (por ejemplo, abordando las preocupaciones de los actores y generando posibles soluciones para problemas del mundo real).			
k) Contribuir de manera proactiva al cambio en las políticas, las prácticas y/o la esfera pública (por ejemplo, mediante consultas sobre políticas, procesos de innovación en relación con las prácticas y la reconfiguración de las relaciones entre los actores).			
l) Empoderar a los actores de la política, la práctica y/o el público para que lideren sus propios procesos de cambio (por ejemplo, mediante la motivación y el desarrollo de capacidades).			
m) Cruzar o tender puentes entre las fronteras de diferentes disciplinas o campos (por ejemplo, vinculando conceptos teóricos de diferentes disciplinas o campos, creando conjuntamente marcos integradores o desarrollando métodos interdisciplinarios).			
n) Sintetizar conocimientos de diferentes disciplinas o campos y generar nuevos conocimientos integrados (por ejemplo, reconociendo conexiones críticas y aprovechando posibles sinergias).			
o) Diseñar, planificar, supervisar, evaluar y valorar los procesos integradores y sus resultados integrados.			

p) Iniciar y facilitar procesos de aprendizaje o experimentos dentro del equipo del proyecto y/o con actores de la política, la práctica y/o el público.			
q) Organizar y preparar talleres, seleccionar e invitar a los participantes (del ámbito científico, político, profesional y/o público) y resumir los resultados.			
r) Proporcionar espacio para la reflexión crítica y la deliberación (por ejemplo, fomentando la expresión de diferentes puntos de vista).			
s) Otro: _____ —			

13. ¿Desea hacer algún comentario respecto a las preguntas 11 y 12 respecto a los diferentes roles del investigador(a)?
14. ¿Cómo vive y armoniza estos múltiples roles? ¿Le representan algunos retos y/o ventajas?
15. En sus proyectos transdisciplinarios, Ud. es consciente de (puede seleccionar una o más opciones):
 - a) sus opiniones personales sobre su tema de investigación (como tipos de soluciones, necesidad de acción, ideología, postura política)
 - b) cómo sus propios valores y normas influyen en sus decisiones durante el proceso de investigación (por ejemplo, en relación con la participación de las partes interesadas, la agenda abierta o cerrada, de arriba abajo o de abajo arriba)
 - c) las posibles repercusiones de su investigación en la sociedad, incluidos los valores y normas políticos y sociales que influyen en ella.
 - d) Otro: _____
16. Por favor, dé un ejemplo que explique la selección que realizó al contestar a la pregunta anterior (pregunta 15).
17. En sus proyectos transdisciplinarios, usted ha informado adecuadamente a sus colaboradores en la investigación y a las partes interesadas acerca de (puede seleccionar una o más opciones):
 - a) los objetivos y la orientación de su proyecto de investigación
 - b) los impactos potenciales de su proyecto de investigación
 - c) los beneficios o el interés que tiene para su investigación (desde el enfoque transdisciplinario)

- d) Otro: _____
18. ¿Podría comentar si ha enfrentado retos (si existieran) en la comunicación sobre el proyecto con sus colaboradores (académicos o locales) y cuáles serían?
 19. En sus proyectos transdisciplinarios, ¿Ud. ha contado con financiación para llevarlos a cabo?
 - a) Sí
 - b) No
 20. En caso de que su respuesta a la pregunta anterior (pregunta 19) haya sido afirmativa, ¿podría brindar un ejemplo?
 21. En sus proyectos transdisciplinarios, ¿usted ha contado con respaldo institucional?
 - a) Sí
 - b) No
 - c) En alguno(s)
 22. En caso de que su respuesta a la pregunta anterior haya sido afirmativa, ¿podría brindar un ejemplo?
 23. En sus proyectos transdisciplinarios, ¿usted ha contado con las capacidades y habilidades necesarias para llevarlos a cabo?
 - a) Sí
 - b) No
 - c) En alguno(s)
 24. En caso de que su respuesta a la pregunta anterior (pregunta 23) haya sido afirmativa, ¿podría brindar un ejemplo?
 25. En caso de que no haya contado con las capacidades y habilidades para realizar el proyecto, ¿cómo enfrentó dichos retos?
 26. ¿En caso de que desee compartir algún(os) otro(s) aporte(s) o comentario(s) respecto a su experiencia como investigador(a) transdisciplinaria, por favor, escríbalo aquí?