

Routledge
Taylor & Francis Group

Journal of Applied Communication Research

ISSN: 0090-9882 (Print) 1479-5752 (Online) Journal homepage: www.tandfonline.com/journals/rjac20

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To cite this article: Jessica Eise, Diana C. Meza-Sepúlveda & Rahul Durai (18 Jun 2026): A field report on the *Clima y Café* initiative: an example of engaged scholarship through tailored climate adaptation communication, Journal of Applied Communication Research, DOI: 10.1080/00909882.2026.2683631

To link to this article: https://doi.org/10.1080/00909882.2026.2683631

Published online: 18 Jun 2026.

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JOURNAL OF APPLIED COMMUNICATION RESEARCH
https://doi.org/10.1080/00909882.2026.2683631

CASE REPORT

A field report on the *Clima y Café* initiative: an example of engaged scholarship through tailored climate adaptation communication

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ABSTRACT

Clima y Café [Climate and Coffee] supports Colombian coffee farmers' adaptation to climate change. The project finds and makes adaptation information available in accessible ways for farmers, while drawing attention to the crisis on a regional, national, and international scale. The website was built through iterative design testing with farmers and is targeted toward local associations that have internet access, are trusted information dissemination hubs, and are reported as central in conversations. Complementary forms of outreach redress internet connectivity challenges facing many farmers and include printed materials, radio segments, podcasts, WhatsApp videos, and in-person seminars. This field report reviews the project's development since its origins in 2018, providing a potential blueprint for other engaged research projects promoting environmental and agricultural outcomes. The report moves chronologically through the project's lifespan, beginning with the formative research that informed its design and moving through project development, external partnerships, leadership transitions, and change management.

ARTICLE HISTORY
Received 16 September 2025
Accepted 11 May 2026

KEYWORDS
Environmental communication; climate change adaptation; engaged scholarship; Colombian coffee

Across the globe, climate change is increasing the frequency and severity of extreme weather events, disrupting seasonal patterns, and worsening inequalities that can accelerate social unrest (IPCC, 2023). A sustainable future depends on both mitigation (decreasing greenhouse gas emissions) and adaptation. Adaptation prepares localities for global-scale change and is a priority in agricultural communities. They face challenges such as rural developmental limitations (Alvar-Beltrán et al., 2020) and high sensitivity to specific climatic conditions (Sawadogo & Mabugu, 2025; Teshome, 2016). What is more, in an international trade market, local climatic changes impact the global supply chain (Mirzabaev et al., 2023).

Climate justice is the attempt to remedy environmental disparities, offer protection against environmental harm, repair past environmental harm, and increase awareness of environmental harm. Researchers may reinforce the disparities that devalue particular populations or may instead attempt to remediate such disparities. Climate justice guided

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our decision-making, from research design to content development. Its influence affirmed our commitment to the interests of rural, smallholder coffee-growing farmers in Colombia.

The project *Clima y Café: Juntos adaptándonos al cambio climático en Colombia* [Climate and Coffee: Adapting together to climate change in Colombia] supports smallholder Colombian coffee farmers' adaptation to climate change by aggregating relevant adaptation information and resources and making them accessible through outreach. The research-informed outreach strategy primarily targets local self-organizing associations as hubs of information dissemination, as they are well-trusted by farmers who report them as central in conversations around adaptation (Eise et al., 2021). With the webpage www.climaycafe.com as its main repository (see homepage in Figure 1), the project gathers information from various stakeholders, research, and firsthand farmer accounts. In partnership with local self-organizing associations and other stakeholder groups, the information is disseminated using diverse forms of outreach that complement the website, such as printed materials, radio segments, podcasts, videos, and seminars.

In this report, we share the evolution of *Clima y Café* and the decisions and activities that informed its growth. In doing so, we provide a practical model for one way in which scholarship and action can be connected to address climate change, one of the 'major intertwined crises' associated with the environment and human health (Zoller, 2024, p. 1). This report offers applied scholars and practitioners a localized framework to work on pressing social challenges. The narrative moves chronologically, from *Clima y Café's* earliest inception in 2018 to its current formation. We include details on funding, personnel, and outcomes to provide an example of the logistics and planning that make such an endeavor possible. To complement the chronological nature of the narrative, several key takeaways are included throughout the report that arose out of our experience navigating that time period. Takeaways include local knowledge and the lack of applied research, paradoxes, and sustainability.

Background: Colombian coffee farmers

In Colombia's mountainous regions, approximately 500,000 families are smallholder coffee farmers (Universidad del Rosario, 2017). They farm small plots of land mostly by hand due to the topography, as the steep mountainsides inhibit most mechanization. Additionally, financial constraints due to poverty and small agricultural yields make expensive technology largely out of reach. Colombia's smallholder coffee farmers are highly vulnerable to rising temperatures and changes in precipitation patterns, as the coffee plant requires niche climatic conditions. Consequently, climate change is projected to harm 80% of Colombia's crop production by 2050 (World Bank, 2021a). Research conducted by our team revealed that farmers are keenly aware of climate change and its impact but unsure of how to adapt, as prominent formal institutions did not support long-term climate change adaptation (Eise & Rawat, 2021; Lambert & Eise, 2020). Most of the farmers do not have regular access to the internet and instead rely on in-person networks and local associations for information on climate change (Eise et al., 2021). Populations more vulnerable to environmental threats often have the least access to environmental benefits (Adeola, 2011; Taylor, 2014) in part because they receive less attention and recognition in news media, risk communication, and



Figure 1. Homepage of the *Clima y Café* website www.climaycafe.com.

social and economic development (Bullard et al., 2007; O'Brien, 2000). Globally, rural farmers are common victims of such inequities, as they are often plagued by poverty, distanced from the public eye, supplied with weaker infrastructure, and perceived or treated

as lower-class laborers (Touch et al., 2024). Most Colombian coffee farmers are smallholders and live below the poverty line (Universidad del Rosario, 2017), lack services compared to their urban counterparts (Cruz-Carbonell et al., 2020), and often have low social status (Tocancipá-Falla, 2006). Colombia's level of income inequality is one of the highest in the world, the second highest in Latin America and the Caribbean, and the highest among all OECD countries (World Bank, 2021b). Smallholder farmers are on the lower end of Colombia's income gradient (Quijada et al., 2019).

The chronology of *Clima y Café*

2018: Foundational research

The project began in 2018 with a year of data collection to understand if and how Colombian coffee farmers were experiencing and responding to climate change, as well as their understanding of the phenomenon and the nature of their information-sharing. Data were collected with a $25,000 internal grant, 'Climate Change Adaptation in Colombia's Coffee Axis: Assessing Communicative Needs of Agricultural Producers', during project founder Jessica Eise's doctoral studies. Eise partnered with two *Universidad Tecnológica de Pereira* professors, Diana C. Meza-Sepúlveda and John Mario Rodriguez. Two sets of data were collected in Risaralda, one of Colombia's 32 departments. The first round of data collection included 45 one-on-one interviews with two to four participants in each municipality in Risaralda. This was followed by a second round of six focus groups and 23 surveys to probe initial findings.

This foundational research is what Barge (2023) characterizes as intervention pathway scholarship. In this case, an *indirect intervention pathway*, which 'generates insight and perspective on communicative problems and practices by conducting original research' (p. 485), illuminated the challenges faced by farmers in their own words and from their perspective. Understanding the farmers' experiences with climate change and communication practices helped identify what type of information would serve them and how to communicate in accessible and preferred ways. Specifically, our findings revealed that in making the seasons less predictable for farmers, climate change created a sense of chaos and uncertainty (Lambert & Eise, 2020). This compounded farmers' pre-existing challenges, such as financial precarity. Farmers indicated they felt unprepared for climate change, and their adaptation efforts were inconsistent (Eise & Rawat, 2021). The farmers reported limited access to the internet, a preference for word-of-mouth communication, and a reliance on local self-organizing associations for information about adaptation as opposed to large, formal organizations that were not acknowledging long-term climate change or were viewed as untrustworthy (Eise et al., 2021).

2019: Development of the project concept

Local self-organizing associations emerged as a useful entry point to reach farmers. These small groups are prevalent across the region and developed organically out of the farmers' desire to organize and coordinate support for one another. They are independent, count on pre-established local networks, and share a strong, vested interest in taking action to sustain and improve their livelihoods through joint sales, development initiatives, marketing

campaigns, and other activities. Our team faced limited financial resources and desired a project strategy that optimized the community's existing network strengths. As such, we created a website targeted to the local self-organizing associations – whose organizing members use the internet – and provided support for them to share information from the website with local farmers who do not use the internet. Websites are cost-effective, and working with local players invites them to be involved in the process and capitalize on their heavily vested interest in supporting their members. From this strategy, the team conceptualized *Clima y Café*, a blended social/academic information outreach project tailored to Colombian coffee farmers. *Clima y Café* sought to address the gap between scholarly rhetoric claiming to advance environmental justice and its embodiment (Raphael, 2019), instead seeking to increase 'communities' involvement in decisions that affect their health and environments … from setting research agendas and funding priorities, to gathering and interpreting data, to drawing conclusions and implementing action' (2020, p. 1091). Our foundational research invited communities to articulate their problems in their words; we reflected our findings back to them, and we created our project concept in tandem with a local team and a board of directors including local farmers, local researchers, stakeholders, and other experts. The goal was to create something usable, useful, and in line with Colombian sociologist Orlando Fals Borda's (1925–2008) advocacy for research that involves farmers in designing, developing, and evaluating the programming and products meant for them. To further this end, the following section on the development and launch of the website describes our use of iterative website testing that involved the farmers in its design.

2020: Launch of the website www.climaycafe.com

With another internal grant of $20,000, the team created the website, staffed by a multinational group of students from the United States and Colombia, select freelancers, and Eise and Meza-Sepúlveda. All contributors were compensated. Eight goals guided the website development. Table 1 presents each goal with a description of how we designed the website to address the goal. These goals included not 'recreating the wheel', aggregating existing resources in one spot for ease of access, promoting dialogue, and building relationships. We also aimed to connect stakeholders with one another and overcome barriers around knowledge-sharing, such as trust-building and lack of technology. The website used a variety of mechanisms to achieve this, such as offering a directory of associations and research groups, videos and content on climate tailored to the Colombian coffee context, solicitations for feedback and shared stories, graphics showing how the local coffee system works politically and economically, and a transparent explanation of how coffee prices are determined, amongst others efforts. The website was populated with information aggregated from partners, existing research, and farmers' firsthand experiences and context-specific knowledge.

We conducted iterative rounds of data collection to build the website based on community feedback. As demonstrated in Figure 2, upon launching our first draft, we collected data to assess the content and design of the website. After being supplied with a laptop and exploring the website for 15–20 min, each participant was asked about their experience, impressions, preferences, and recommendations in a one-on-one interview. This occurred twice, and each time the users' feedback was incorporated into

Table 1. *Clima y Café* website goals and accompanying website features.

Website goal	Website feature
1. Reduce redundancy in information and resources by creating an accessible central repository of existing knowledge and resources salient to climate change adaptation in the Colombian coffee sector.	The website hosts content from a variety of existing organizations. There is a page of educational tools shared from collaborators. Visitors are invited to email to share resources. Additionally, the advisory board is tasked with sharing existing resources.
2. Effectively connect stakeholders (individuals and/or organizations) with one another in order to facilitate development and dissemination of knowledge and resources salient to climate change adaptation in the Colombian coffee sector.	The website offers a directory of associations (self-organizing, local coffee grower groups), cooperatives (points of sale and service centers for coffee) and research groups (conducting research on climate or coffee).
3. Encourage conversations around and raise awareness of climate change adaptation in the Colombian coffee sector.	The website has a page dedicated climate change with informative videos and content tailored to the Colombian context that can appeal to a wide audience.
4. Maximize existing, local knowledge systems by creating both space and platform for formal and informal knowledge of climate change adaptation in the Colombian coffee sector to be shared, discussed and developed in an accessible way.	The website contains a forums page with seven sub-forums that is designed for coffee farmers to share their knowledge, with an accompanying video tutorial explaining how to use the forum. The 'Adaptation' page also directly solicits stories and experiences.
5. Educate stakeholders on communication and knowledge-sharing around climate change adaptation in the Colombian coffee sector in order to encourage and draw attention to the importance of disseminating knowledge and resources.	The website provides a graphic describing the coffee system in Colombia and how the informational structure is designed.
6. Bridge the digital divide of coffee farmers in this region. A minority of coffee farmers self-report using email and the internet on a regular basis and subsequently only a minority are able to access an online platform.	The site integrates how-to videos for site usage (overall site, forums), simple graphics and offers straightforward navigation. It is user friendly and responsive when viewed on a cellular device.
7. Leverage existing information-sharing ties to maximize impact with scarce resources. This website is created in an environment of scarce resources (i.e. financial, personnel, institutional, etc.), whereby it must base its decision-making around the goal of resource maximization for impact.	Upon site launch, the site is emailed to associations (using the directory) with a text to encourage them to share with their coffee farmers in in-person meetings. This email can be found in Appendix E and was accompanied by an audio of the text. A brief follow-up email reminder was also sent.
8. Encourage use through trust-building to overcome weak ties with formal organizational and governmental institutions, as well as feelings of abandonment and mistrust of organizational and governmental institutions.	The site uses language that affirms coffee farmers' experiences and knowledge. It offers useful tools transparently that farmers request, such as coffee pricing. It has a 'Who We Are' page with transparent details of the team and advisory board with contact information.

design and content. The research team drove to various locations in Risaralda, Colombia, and 57 total participants provided feedback, including a range of coffee stakeholders, primarily coffee farmers. Research participants were not compensated, as local partners said it was not appropriate in the context. This research served as the founder's dissertation research (Eise, 2020) and contributed to scholarly findings on digital usability and accessibility (Eise & Thoene, 2025). This iterative approach allowed for a more flexible back-and-forth dialogue where community members could express their preferences and contribute to development. The project entered a new phase of engaged research, blending two of Barge's (2023) intervention orientations: *intervention as design* (planned change whereby an aspect of communication is intentionally altered) and *intervention as co-creation* (listening to voices and including community in development).

In the first iteration, participants recommended the following top four changes in order of importance: more multimedia, more practical adaptation tips, add daily coffee prices, and simplify for non-tech users. Of lesser prominence were changes related to

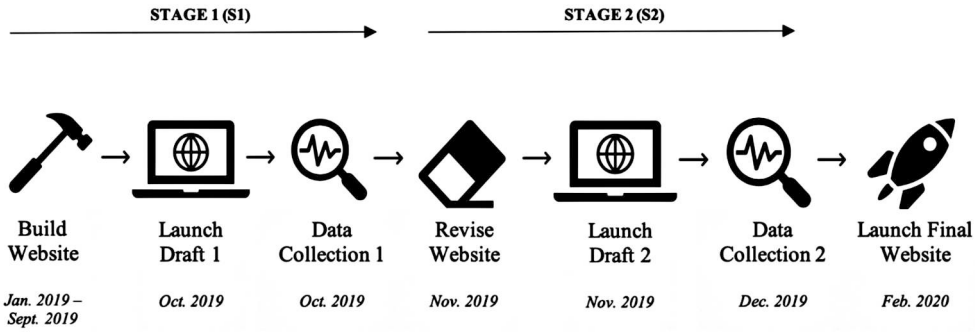


Figure 2. Timeline of iterative data collection and website construction.

reducing lengthy texts that were tiresome to read and desiring the website to have more color. These recommendations informed the website revisions and resulted in our second iteration, which included all recommended changes, in addition to audio recordings of any text-heavy content that could not reasonably be edited out.

The second data collection confirmed that the suggestions had been generally integrated with success. However, participants still voiced several recommendations to improve the website. Participants recommended, in order of importance, the following top four changes: more specific and practical information overall, improve forum accessibility, more profitability/business content, and add personal-action tips for everyday use. Of note was the reiteration of their preference for more information directly applicable to their daily lives and additional advice for maximizing agricultural profits (Eise, 2020).

Takeaway #1: Community-driven knowledge and the absence of local, applied research

For the farmers, the problem was not only a matter of clarifying language; it was that the information they needed did not exist or only scarcely existed within academic research. As such, it was not just a translational issue; it was an epistemological issue. As the founding director wrote at the time:

> Farmers consistently reported their need for more practical support, developed and communicated in a straightforward, practical way … there is much great and valuable work – yet the majority appeared to be created with the intention of interesting and serving other academics, not solving an immediate and existing problem facing laypeople. (Eise, 2020, pp. 62–63)

Existing academic research was broadscale, covering large models or high-level predictions. Studies did not contain enough granularity to be of use to the farmers, nor did they accommodate various realities the farmers face, such as not having any meteorological data or weather predictions to rely upon to make decisions. Ultimately, the content primarily used on the website originated from the farmers' own experiences. In the absence of relevant academic research studies, community knowledge offered hands-on accounts of various techniques or problem-solving methods that were context-specific. These stories arose out of the interviews that were conducted with the farmers in the 2018 foundational research, as well as more informal, daily

communication with associations and farmers. The advice that certain farmers reported as successful became the 'meat' of the site, because it was specific, practical, and viable (i.e. planting shade trees between the rows of coffee to keep them cooler, diversifying crops, adding value to production to increase profit to compensate for a loss of yield, etc.). In this way, the site itself magnified the success stories inherent within the community and became a spreading point for practices that had been proven to work for its members. This practice is consistent with the culture-centered approach of engaging community members' voices in knowledge production about the issue in focus and potential lines of action (Dutta et al., 2013; Dutta & Thaker, 2019, 2020).

2021: Bridging and outreach

After using a participatory knowledge-gathering approach, the project moved to a participatory approach for knowledge-sharing. The next phase was to raise awareness of the resources and assist the spread of knowledge from the website through the local self-organizing associations and other stakeholders to the farmers. This phase was funded by a National Science Foundation EAGER grant (PI Jessica Eise, #2037677) for $71,000. This is a funding mechanism that supports exploratory work in early stages on untested but potentially transformative ideas or approaches that are considered 'high-risk, high-reward'. The team envisioned a diversified portfolio of creative, accessible, and tailored media to spread information about climate change adaptation to the farmers. As radio was reported as a popular form of communication, we organized two radio segments that aired on local stations, specifically *Radio Guatica* and the station *Campus Informa Universitaria Stereo – UTP*. We produced the podcast series *Tiempo del Café: Experiencias de la Caficultura con el Reto Climático* [Coffee Time: Experiences in the Coffee Sector with the Climate Challenge], recruiting local radio personality Andrea Murillo Bernal and producer Paula Andrea Rendón Cardona to interview farmers about how they were adapting to climate change. Our four podcast episodes covered water, crop change, fertilizer, and shade, respectively.

WhatsApp was also a preferred method of communication. We produced five videos that we distributed through various WhatsApp groups of two to three minutes in duration, covering an introduction to climate change, cultivation under shade, diversification of crops, coffee varieties, and economic adaptability. For social media users, during the pandemic, we hosted three training sessions on Facebook Live covering climate change adaptation, which were facilitated through local associations and local universities to serve farmers with internet access, interested students, and other coffee stakeholders. As the majority of farmers do not regularly access the internet, we developed printed materials that included a large poster, shown in Figure 3, with ten tips about climate change adaptation for coffee farming. We also designed a calendar, shown in Figure 4, with one tip under each month. We sent 40 posters and 1000 calendars to self-organizing associations and community organizations across six coffee-growing municipalities in Risaralda to distribute to their members during regular meetings or drop-in visits.

To reach the next generation of Colombia's rural citizens and to encourage information-sharing between children and parents, the team published a children's picture book, collaborating with an author, an illustrator, and a translator. In 2022, they

published *Flora y la Tierra Encantadora: Una niña valiente enfrenta el cambio climático para salvar su finca* [Flora and the Beautiful Earth: A brave little girl stands up to climate change to save her farm] (Montes et al., 2022, see Figure 5). Targeting 10- to 13-year-olds in Colombia, this 31-page book guides readers through 11-year-old Flora's journey of saving her coffee farm in the face of climate change. With her friend Marco and dog Pancho, Flora learns from her Grandma Aurora that she can seek agency over her future. We created Spanish and English editions, printed over 1000 copies, and distributed these complementary copies to rural schools in the Colombian municipalities of Santuario, Pereira, and Santa Rosa de Cabal, allowing our campaign to have an intergenerational reach.

The project also ran an arts-based approach by developing a photo exhibit for local citizens and the media from December 9–18, 2021, in the municipal center of Santa Rosa de Cabal, Colombia. The 25-photo exhibit, entitled '*Protectoras Desconocidas: Mujeres Rurales y la Tierra*' ['Unseen Guardians: Rural Colombian Women and the Earth'], showcased portraits and quotes of female coffee producers in Colombia who dedicated their lives to maintaining rural areas and managing all the ensuing challenges in protecting their environment, livelihoods, and families (see Figures 6 and 7). The bilingual exhibit featured women coffee farmers with quotes about the environment alongside information raising awareness of climate change. The same day of the launch, the exhibit was released digitally on the website *Clima y Café* in Spanish (https://climaycafe.com/expofoto/) and English (https://climaycafe.com/photoexpo/). After the exhibition, the physical pictures were donated to the local *Universidad Tecnológica de Pereira* in Risaralda, Colombia, for permanent display.



Figure 3. Posters distributed for free to associations to hang in their local offices.

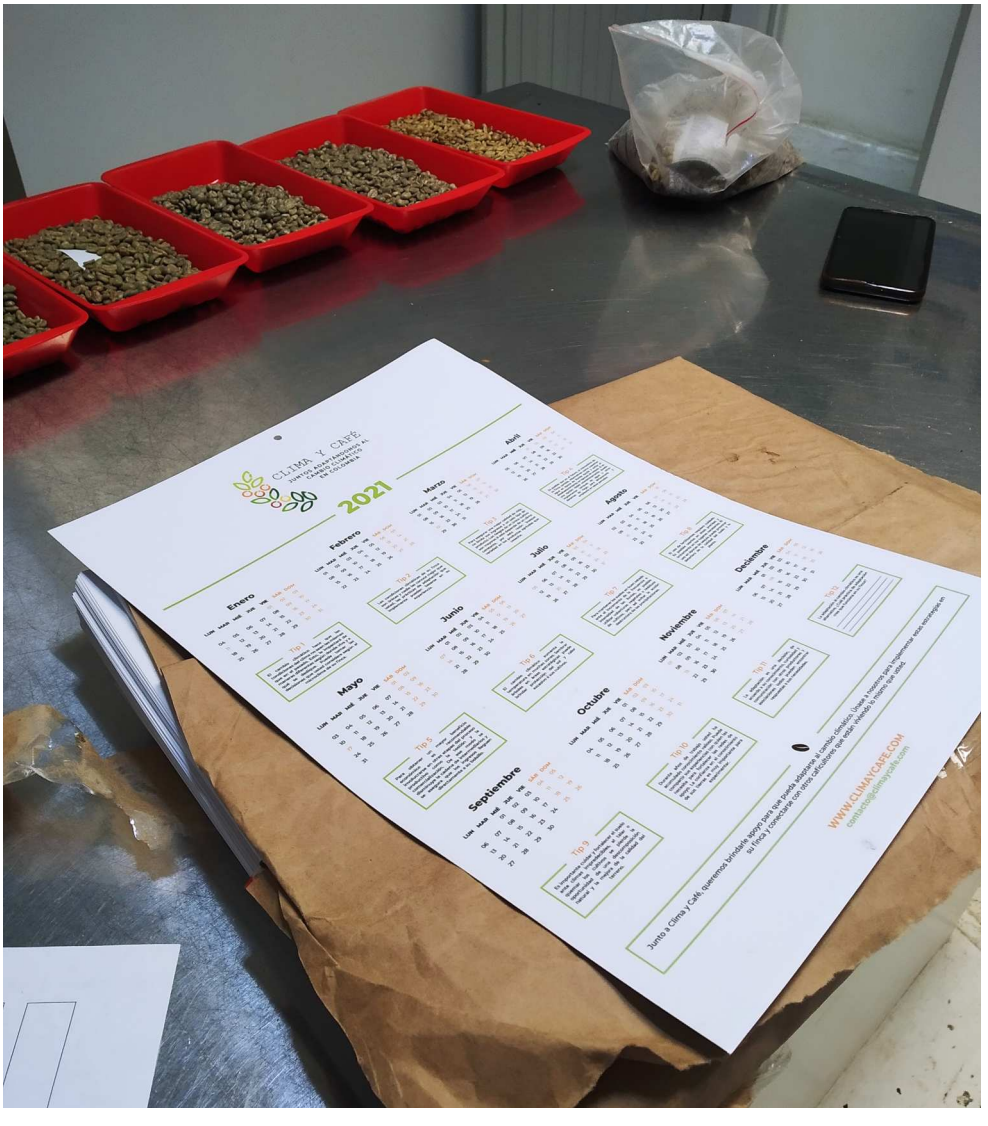


Figure 4. Calendars distributed for free to associations to share with local members.

Takeaway #2: The paradox of academic and community needs

Researchers face challenges that can appear as or become insurmountable when attempting to treat scientific and practical knowledge as equitable (Barge & Shockley-Zalabak, 2008). These 'paradoxes' of engaged scholarship, defined as a 'no-win situation in which the alternatives are mutually exclusive and failure to embrace either one will result in unacceptable consequences' (Carlson et al., 2017, p. 289), occur when an academic researcher seeks to meet their own career's priorities as well as a community's priorities. As a researcher chooses how to spend their time and resources, manages their desire for recognition and publication, handles their biases, and chooses what and where to research, they may approach the tensions inherent in engaged scholarship

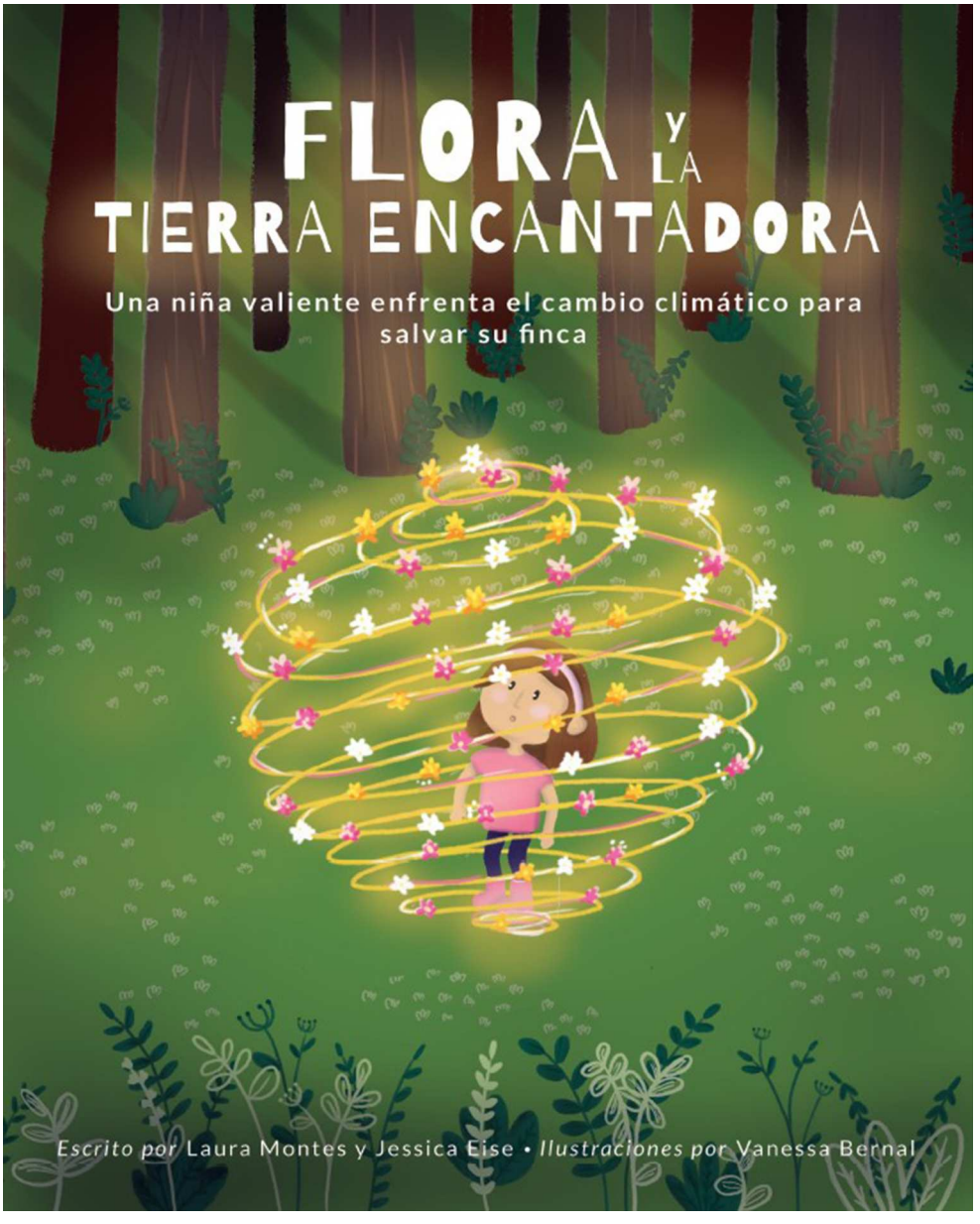


Figure 5. Cover of the children's book distributed for free to rural schools.

with a solution framework based on a range of higher-order or lower-order responses to dilemmas. Such responses – as identified by Carlson et al. (2017), who considered earlier work in this space (Baxter & Montgomery, 1996; Poole & Van de Ven, 1989; Seo et al., 2004) – include denial, cosmetic response, selection, alternation, segmentation and transcendence. When someone confronts a social paradox, which a researcher does when competing between academic and lay society's demands, they must choose between competing alternatives that have 'real-world' material and social consequences' at stake (Carlson et al., 2017, p. 289).



Figure 6. *Clima y Café* Colombian student team members, Mario Esteban Isaza and Nicolás Angel Gómez Luque, photographing and recording quotes for the exhibit.

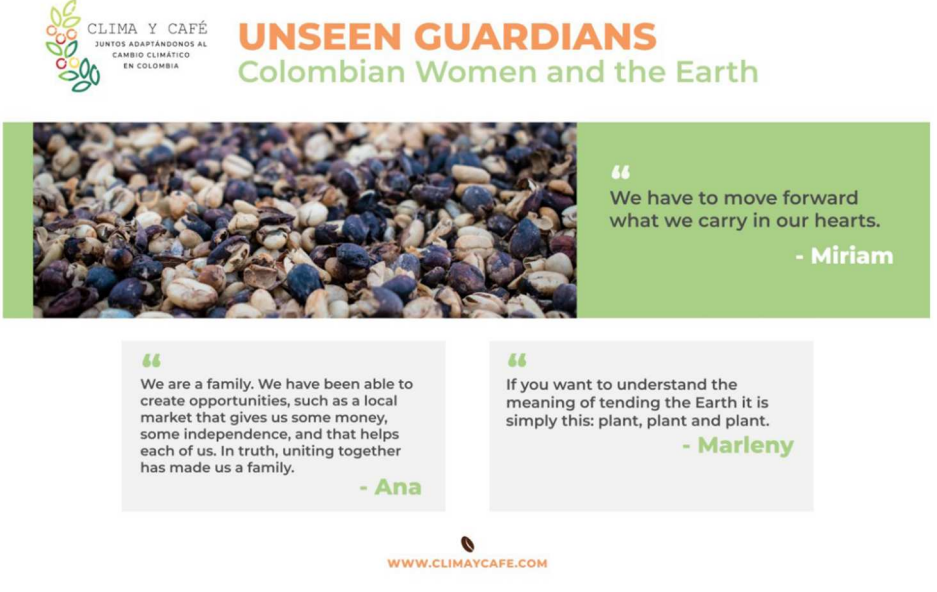


Figure 7. Excerpt of quotes from the '*Protectoras Desconocidas*' ['Unseen Guardians'] photo exhibit.

Transcendence is when dilemmas and tensions are confronted, accepted, and worked out through creative responses based on continued vigilance, adaptability, creativity, improvisation, and continuous learning (Carlson et al., 2017). Transcendence occurred

earlier in the project in 2020 when the founder conducted initial research on digital usability, using www.climaycafe.com as the test website for the research participants (i.e. farmers), so that the findings informed not only her academic scholarship but *also* practical modifications to the website to better meet the farmers' needs. Other higher-order responses include alternation (switching from one pole to the other over time) and segmentation (some people address one pole while others address the other pole) to address issues that, under current institutional norms, are too entrenched to immediately change (Carlson et al., 2017). The 2021 year of outreach and bridging discussed above was confronted through alternation. That year, the community needs were privileged through outreach. While alternation was done intentionally, it resulted in negative material consequences for the team, as they lost academic output in lieu of investing in the development of materials and execution of communication strategies.

In turn, the *Clima y Café* team strategically chose higher-order responses of transcendence, alternation, and segmentation. However, denial (pretending or rejecting that there is a problem), cosmetic response (addressing the problem through superficial means), and selection (only choosing to address one side of the problem) are all prevalent within engaged scholarship, and a lack of awareness or recognition of the paradoxes exacerbates the problem. Denial refutes that there is incompatibility between academia and broader society. Cosmetic response is likely the most common lower-level response, as researchers may knowingly or unknowingly convince themselves and others that their community efforts are adequate when they are perhaps only fleeting or superficial. Selection, of course, is choosing only one beneficiary, and rarely is that the community. Without consciousness of the paradoxes between aspects of academia (slower time frames, need to publish, peer recognition, limited financial resources, interest in theory, highly competitive job market) and community (need for urgent problem-solving, desire for practical solutions, no or limited interest in theory), scholarship can result in lower-order responses, which will likely harm the community over academia.

2022: Building external partnerships

Goal 7 of the project was to leverage existing information-sharing ties to maximize impact with scarce resources. Building external partnerships allowed us to leverage resources and expertise. Our primary partnership was with the World Resources Institute to create an international initiative known as AgriAdapt (https://agriadapt.org/). In addition, we were invited to join the *Mesa Agroclimática de Risaralda* [Risaralda Agroclimatic Table], which involves regular meetings with regional stakeholders to discuss agriculture and climate topics of concern. We participated in various conferences and events and received funding from our local partner university, the *Universidad Tecnológica de Pereira*, to conduct the social extension project *Clima y café: una estrategia de comunicación para la adaptación al cambio climático* [Climate and coffee: a strategy for communication for climate change adaptation]. This supported three public, free workshops in Caldas, Quindío, and Risaralda, as well as the development and distribution of printed materials to 500 attendees. These external partners were able to leverage our expertise, and in turn, we were able to integrate their resources into our own project. In approaching these partnerships, we used the same standards of relationship-building as used throughout the project: clarity of work, no 'free' work that excludes those who cannot afford to do so, cordiality, respect, and mutual concern.

2023–2026: Restructuring and the future

In 2023, project founder Eise formally transferred the project's directorship to its long-standing Colombian collaborator Meza-Sepúlveda during a large public meeting with stakeholders. Though the plan is to retain Eise in the capacity of advisor, the shift in leadership moves the project's decision-making and daily activities into the experienced hands of local management. The nexus of the project moved to the *Universidad Tecnológica de Pereira*, where a faculty member – who had been involved with the project since its inception in 2018 – took leadership of the project. This transition was influenced by the pandemic – which illustrated the limitations of long-distance involvement, especially in a project that rests on trust – and relationship-building – as well as the team's belief that while respectful and intentional international research is fruitful and beneficial, projects reach a point at which they are best managed by those who live in the community itself.

In 2024, *Clima y Café* continued with its outreach activities, this time under its new leadership structure. With financing from both Indiana University and the *Universidad Tecnológica de Pereira*, the team continued with a multipronged communication strategy to generate and distribute updated content through both the website and complementary outreach. These efforts included filmed interviews, adaptation videos, and workshops in which stakeholders in the coffee value chain discussed strategies such as WaPOR and highlighted adaptation occurring in the Reserva Natural Maporita in San Rafael, Antioquia. The team also continued participation in both national and international academic events, such as the United Nations Biodiversity Conference (COP16).

The project continues to be managed out of the *Universidad Tecnológica de Pereira* and run by its local team with support from both national and international advisors as needed. Times have changed since the project's inception in 2018, when little attention was being paid to the plight of coffee farmers in Colombia. Awareness of climate change's threat to Colombian coffee farmers has significantly increased in part due to the project's national and international media strategy. We have published pieces in outlets such as *CNBC*, *MarketWatch*, *Yahoo! News, Quartz*, and *Sierra* (Eise & White, 2018; Eise, 2019); communicated with journalists from organizations such as *VICE* (Yeung, 2020) and *Vox* (Ellis & Villamil, 2020); and developed outreach campaigns such as *Desarraigo* [*Uprooted*] (Redacción Semana, 2020). Since its inception, *Clima y Café* has supported the evolving needs of the community through a core structure (the website, www.climaycafe.com) along with adaptable and tailored outreach activities. Going forward, the team remains open to how the project may evolve as Colombian coffee farmers' landscapes, challenges, and needs change. Many of the project's lessons with coffee are now being seen as applicable to the local *cacao* sector as well.

Takeaway #3: Sustainability

Clima y Café was intentionally developed as a long-term project integrating local partners. While it has counted on grant funding for many of its various phases, its existence is not contingent upon grants, which makes it resilient against the uncertainties of funding mechanisms. The website and materials are evergreen, and additional staff can be hired on a project-by-project basis. It is risky to depend exclusively upon continuous grant funding for an initiative's existence, as grant priorities rapidly change depending on governing bodies or institutional budgets. Scholars have suggested further inquiry into the

long-term sustainability of intervention research (Barge, 2023), as academia faces an imperative to do something in the face of pressing social challenges. But, if that 'something' is fleeting, out of touch, unsustainable, or poorly considered, then we are contributing to problems rather than working against them. A critique of climate change mitigation and adaptation efforts is that they are designed without the leadership of frontline communities (Fine, 2023), resulting in 'solutions' that often exacerbate problems (Mercer et al., 2012). From its earliest data collection, *Clima y Café* was a team effort with local partners, and it has transformed the team's buy-in, expertise, and collaboration.

What is more, the practice of an academic researcher or research team entering a community, extracting data, exiting, and not returning can foment mistrust, resentment, or feelings of being 'burned.' *Clima y Café* involved local collaborators and sought to maintain continuous contact with local communities, but we still question if we have done enough to balance our farmers' contributions with our outreach activities. We hope we continue to pursue this balance.

Conclusion

This report reviewed the inception and development of the blended social/academic outreach project *Clima y Café* that supports Colombian coffee farmers' adaptation to climate change. Alongside its chronology, the report included three takeaways on academic relevancy, paradoxes between academic and community needs, and project sustainability. Since 2020, *Clima y Café* has strived to connect scholarship and action by supporting coffee farmers in immediate climate change adaptation efforts while also increasing visibility of this unfolding crisis.

Acknowledgments

We acknowledge the National Science Foundation for their funding (#2037677). We would like to thank Universidad Tecnológica de Pereira, Indiana University School of Public Health-Bloomington Department of Environmental and Occupational Health, the University of Texas at San Antonio, and Purdue University for their support. We offer our thanks to Dr. Heather Zoller of the University of Cincinnati, Dr. Meghana Rawat of Utah Valley University, Dr. Anamaria Bukvic of Indiana University, and Dr. Kimberly Kline of the University of Texas at San Antonio for their review and feedback on the report.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This work was supported by the National Science Foundation [Grant Number 2037677]; Indiana University; Purdue University; Universidad Tecnológica de Pereira Tecnológica de Pereira; and the University of Texas at San Antonio.

Data availability statement

Data are not available due to ethical restrictions. Due to the limited number of participants and the public nature of the *Clima y Café* project, participants may be identified through their responses.

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