

Collaborative Dynamics Among Academia, NGOs, and Indigenous Communities in Latin
America: The Impact of Social Change-Oriented Information Science Research

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A dissertation
submitted in partial fulfillment of the
requirements for the degree of

Doctor of Philosophy

University of Washington

2025

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The Information School

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Abstract

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This dissertation investigates how collaborative information-science projects between Indigenous communities, academic institutions, and non-governmental organizations (NGOs) can support decolonial development and Indigenous self-determination. Centered in the Vaupés region of Colombia, the study examines the conditions under which participatory methodologies foster not only co-design, but accountability to people, to place, and to the long histories and futures embedded in Indigenous territorial governance.

The research centers on a participatory training program known as the *Diplomado en Liderazgo, Comunicación y Cambio Climático*, co-developed with Indigenous associations ASATIQ and ASATRIZY, in partnership with Fundación Colombia Multicolor, Wildlife Works, and the Universidad Nacional Abierta y a Distancia (UNAD). Conducted between 2021 and 2022, the diplomado brought together over a hundred leaders from communities across the Querarí, Yapú, and Papurí river regions. Through three intensive sessions, participants engaged in collaborative project development using participatory mapping, community photography (Photostories), serious games (Mayuk and Cachiveras), and thematic dialogues. These tools facilitated cultural documentation, environmental planning, and the expression of community-defined priorities for development.

This work is anchored in a three-part analytical framework: settler colonial studies, Participatory Action Research (PAR), and the human rights-based approach (HRBA) to development. Settler colonialism is understood as an enduring structure that shapes the conditions of research and development in Latin America, often through exclusionary and technocratic forms of intervention. PAR, rooted in Latin American praxis and the work of Orlando Fals Borda, grounds the research in relational, iterative collaboration. The HRBA, following Charters & Stavenhagen and informed by the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), articulates actionable principles for ethical development: that it must be endogenous, participatory, equitable, self-managed, culturally appropriate, and accountable.

Findings from Vaupés demonstrate that participatory information systems can enable collective planning, support cultural continuity, and strengthen Indigenous governance, when they are embedded within relational processes and aligned with community-led visions. Participatory mapping helped articulate past, present, and future relationships to territory. Photostories documented daily life and ecological change while serving as platforms for reflection and advocacy. Games like Mayuk and Cachiveras opened accessible, culturally grounded dialogues about communication, identity, and environmental care. These activities surfaced priorities such as food sovereignty, intergenerational knowledge transmission, forest protection, and educational access. The diplomado's structure, which was rooted in co-facilitation, multilingual practice, and collective certification, allowed for sustained engagement and the institutional recognition of Indigenous leadership. Beyond the outputs of each individual method or their contributions to capacity building and community development, this work goes one step further by developing an evaluative HRBA framework. This tool can be applied to each method of engagement, and to the architecture of collaboration itself. That is, all of the parts that go into the development of the project: dialogue, planning, relationships building, logistics, etc. The goal here is to identify how a participatory activity/method, and all of the parts of the project, align with an HRBA principle, and which Declaration article underpins. This evaluative framework in combination with PAR can help us understand these collaborative dynamics across sectors and between communities by aligning Information Science research with a grounded approach to incorporating human rights within research design. This dual-lens approach

helps bridge the gaps between arbitrary measures and metrics of success and what actionable, tangible benefits communities experience during these research and development interventions. It also creates a layer of accountability and reflection for the researchers and institutions that seek to partner with communities.

This dissertation does not offer a technical model for replication, rather it offers a charge for researchers. It challenges information science research to confront the social and political consequences of its designs, to move beyond extractive research norms, and to reimagine innovation as a process rooted in humility, relationality, and principled resistance. It affirms that rights-based, participatory approaches are not simply ethical additions, but necessary responses to ongoing colonial structures and institutional inequities. In an era of increasing political pressure on academic freedom, evolving metrics of progress, the erosion of human rights protections, and widening digital divides, the work asserts that research must not retreat into neutrality, rather it must resist and transform. This model of engaged scholarship developed here is unfinished by design and it insists that meaningful collaboration must be relational, iterative, and guided by those whose lives, lands, and knowledges have too often been marginalized.

Acknowledgements

First and foremost, I thank my family who have supported me, encouraged me, and walked side by side with me my entire life. I thank my parents, *mi mami y mi apa*, for their love, strength, resilience, and hard work. It is through their courage and sacrifices that I am able to be here today, and why I am inspired and motivated to do this work. Although my dad has passed on, his influence and spirit are imprinted on everything that I do, *con talento*. My best friend and big sister, thank you for being a generous and caring spirit, and for being my biggest cheerleader. My brother, for your support, and for imparting on me a love of the arts, film, and music. My extended family: a matriarchy composed of strong, resourceful, fearless women who I know root for me and support me from afar and across borders. My incredible group of friends: Those of you who I have known since childhood *y que ya somos tias*. Those of you who have stuck with me when I couldn't always be 100% present but uplifted me in the many seasons of life. From travelling, having deep conversations by the fire, laughing, crying, Friendsgiving, two-stepping, Marseille, trivia, karaoke, potlucks, puzzles...all of it. *You can cry, but you've gotta keep going*. Of course, an honorable mention to the floofy pals in my life - the bestest, gooddest pups and kittens who never turned down a nice walk... or a treat.

Mike Katell and Sarah Leyrer, who welcomed me to Seattle and into their home. Your wisdom, wit, and presence are dearly missed. In these times, I think of you and your commitment to justice, love, and community. I will miss you forever.

My i17 cohort for the support and camaraderie in embarking on this academic journey together. Will forever be grateful for the Clink support & memes. RF for adventures, endless support, encouragement, and of course neighbours. My friends and colleagues across institutions, who are too many to list, but who have helped shape me, my education, and my career in one way or another. Those of you that without reservation, said: "Go for it!" "You can do it!" "I believe in you." "How can I help?" This work can't be done alone, and you have helped me along the way more than you can imagine, and more than I can express. Thank you.

I am incredibly grateful to my committee, who have guided me through this journey and encouraged me when it felt impossible. Tony & Jason, thank you for the reassurance, advice, and reminding me that the work isn't always linear. Michelle and Jose, thank you for your time and willingness to help. Ricardo, from day one you have been a steady support, collaborator, and offering the straightforward, practical advice that it takes to get through something like this. But you have also offered the empathy and care that has made this journey possible. You have led by example, and I've learned from you how to be a present and caring teacher, a thoughtful scholar, and also enjoy the simple joys in life, *como una tortilla recién echa con el café*. *Gracias!*

Finally, I am deeply grateful to the communities I have worked alongside in Mexico, Peru, and Colombia. I am forever changed and continually inspired by your strength and resilience in pursuit of a more just and equitable world. *Juntos podemos salir adelante, avanzando la soberanía, los derechos humanos y la protección del medio ambiente*.

List of Tables and Figures

Table 1.1: Methods Used during Diplomado.....	15
Table 2.1 HRBA Principles for Development Within Indigenous Context.....	30
Table 3.1 Research Question Labels.....	52
Table 3.2 Method Alignment with Research Design & Frameworks.....	52
Table 3.3 Participatory Activities (PAR-Informed Process)	66
Table 3.4 HRBA Evaluation of Project Components.....	67
Table 4.1 HRBA Principles for Development Within Indigenous Context.....	79
Table 4.2 UNDRIP Articles and their Relation to HRBA.....	85
Table 4.3 HRBA Evaluation of Mayuk Session.....	89
Table 4.4 HRBA Evaluation of Cachiveras Session.....	92
Table 4.5 HRBA Evaluation of Photostories Session.....	95
Table 4.6 HRBA Evaluation pf Participatory Mapping Session.....	98
Table 4.7 HRBA Evaluation of Collaborative Infrastructure.....	101
Table 4.8 Cross-Method Alignment with HRBA Principles.....	105
Figure 3.1 View of Vaupes River.....	47
Figure 3.2 View of Community Runway in Yapu.....	47
Figure 3.3 Maloca of Yapu	49
Figure 3.4 Vestiges of Western Religion.....	49
Figure 3.5 Yapu's Educational Institute.....	50
Figure 3.6 Repurposed Satellite Dish.....	50
Figure 3.7 Santa Rita Community Objectives.....	54
Figure 3.8 Santa Rita Project Objectives	54
Figure 3.9 Community Chagra Illustration	55
Figure 3.10 Santa Rita Group Presentation	55
Figure 3.11 Photostories: Centering Women's Voices and Experiences	58
Figure 3.12 Photostories Behind the Scenes	58
Figure 3.13 Paye Gregorio on the Importance of the River Papuri	59
Figure 3.14 Participatory Mapping	61

Figure 3.15 Participatory Mapping Process	61
Figure 3.16 Community San Antonio-Papuri Map	62
Figure 3.17 Concluding Diplomado through Dialogue	64
Figure 3.18 Story spiral as symbol of community, collaboration, and interconnection	65
Figure 3.19 Diplomado Conclusion and Celebration	72
Figure 3.20 Diplomado Woman's Group	73
Figure 3.21 Behind the Scenes: Woman's Group Community Support	73
Figure 3.22 Phases of Engagement	74
Figure 3.23 Diplomado Group Picture	75

Contents

Abstract.....	i
Acknowledgements	iv
List of Tables and Figures	v
Chapter 1. Introduction: Research as Relationship	1
1.1 Overview and Regional Context	1
1.2 Significance and Scholarly Gap	5
1.2.1 Problem Statement	6
1.3 Theoretical Framework Preview	8
1.4 Research Questions and Aims	10
1.5 Methodological Preview.....	12
1.6 Roadmap of the Dissertation.....	16
Chapter 2: Frameworks for Rights, Resistance, and Knowledge:	18
2.1 Introduction: Framing the Theoretical Landscape	18
2.2 Settler Colonialism and the Politics of Knowledge	21
2.3 Indigenous Knowledge Systems and Information Practice.....	25
2.4 Human Rights-Based Approaches and Indigenous Sovereignty	28
2.5 Participatory Action Research and the Ethics of Engagement.....	32
2.6 Institutional Engagements in Indigenous Territories	34
2.7 Conclusion: Toward More Inclusive Information Science Research.....	38
Chapter 3. Grounding the Work: Methods, Ethics, and Collective Process.....	42
3.1 Introduction	42
3.2 Methodological Orientation: Participatory Action Research and the Human Rights- Based Approach.....	44
3.3 Research Site: Vaupés, Colombia	46
3.4 Data Collection in the Vaupés Project.....	51
3.4.1 Overview of Data Collection and Methodological Alignment.....	51
3.4.2 Participatory Games and Serious Play: Mayuk and Cachiveras	53
3.4.3 Photostories and Participatory Mapping	56
3.4.4 Dialogues, Planning Sessions, and Documentation	62

3.5 Data Analysis and Community-Centered Interpretation.....	64
3.6 Ethical Commitments and Researcher Positionality.....	67
3.7 Project Timeline and Phases of Engagement.....	70
3.8 Conclusion	75
Chapter 4. Applying a Human Rights-Based Framework to Participatory Information Science Research.....	78
4.1 Introduction: Framing the Human Rights-Based Participatory Lens.....	78
4.1.1 Purpose and Analytical Approach.....	80
4.1.2 Participatory Interpretation: The PAR Dimension.....	81
4.1.3 Human Rights-Based Evaluation: Operationalizing HRBA.....	82
4.1.4 Aligning Research with UNDRIP	83
4.1.5 Framing the Dual-Lens Evaluation Model.....	86
4.2 Mayuk – Cultural Reflection and Collective Analysis.....	87
4.3 Cachiveras – Designing Communication and Advocacy.....	90
4.4 Photostories – Visual Storytelling and Epistemic Visibility	92
4.5 Participatory Mapping – Territorial Futures and Planning.....	95
4.6 Dialogues, Planning, and the Architecture of Collaboration	98
4.7 Synthesis and Cross-Cutting Themes.....	102
4.8 Conclusion	106
Chapter 5. What the Work Reveals	109
5.1 Introduction: From Evidence to Interpretation.....	109
5.2 Revisiting the Research Questions.....	111
5.3 Participatory Action Research in Practice.....	113
5.4 The Human Rights-Based Approach in Action	117
5.5 Convergences and Tensions Between PAR and HRBA.....	119
5.6 Limitations and Boundaries of Scope	123
5.6.1 Temporal Limitations	123
5.6.2 Institutional Transitions.....	123
5.6.3 Methodological Reflections	124
5.6.4 Representational Limits.....	125
5.7 Implications for the Field of Information Science.....	126

5.8 A Tangible Tool for Researchers	129
5.9 Closing: What This Work Reveals	131
Chapter 6. Conclusion: Research as Responsibility	134
6.1 Returning to the Journey	134
6.2 What This Research Contributes	135
6.3 Limitations Revisited, with Purpose	138
6.4 Future Directions	140
6.5 Carrying the Work Forward	142
References	145

Chapter 1. Introduction: Research as Relationship

Positioning Collaborative Inquiry with Indigenous Communities

1.1 Overview and Regional Context

In recent decades, the persistent disparity in wealth and infrastructure between the global North and South has spurred increased involvement by non-governmental organizations (NGOs) and academic institutions in the development sector. This is particularly evident in Latin America, where Indigenous communities continue to face systematic exclusion from public services, limited access to technology, and enduring legacies of colonialism and internal displacement. Many communities in this region maintain complex and often adversarial relationships with state institutions, shaped by long histories of neglect, corruption, and violence ([Runde et al., n.d.](#)). These conditions have led to a vacuum of trust and resources that NGOs, multilateral programs, and researchers frequently attempt to fill. While these efforts may seek to support community well-being, they also risk reproducing paternalistic or extractive models of intervention unless they are grounded in ethical frameworks that recognize the collective rights, autonomy, and cultural authority of Indigenous peoples.

The department of Vaupés, Colombia, serves as the primary field site for this dissertation. Located in the eastern Amazonian region and bordering Brazil, Vaupés spans approximately 54,135 square kilometers, with a population of just under 47,000 residents ([DANE, 2023](#)). The region is characterized by extraordinary cultural and linguistic diversity. More than thirty Indigenous languages are spoken, primarily from the Tukanoan, Arawak, and Nadahup families. These languages coexist within a social structure that

emphasizes multilingualism and linguistic exogamy, whereby individuals are expected to marry outside their linguistic group ([Aikhenvald, 2022](#)). This multilingual system is closely linked to territorial identities and intergenerational knowledge transfer, forming a crucial part of social cohesion and cultural continuity in the region.

Despite its cultural richness, Vaupés experiences profound infrastructural and technological marginalization. In 2023, the region recorded an Índice de Brecha Digital (Digital Divide Index) of 0.621, the second-widest digital gap in the country ([MinTIC, 2024](#)). The lack of connectivity and digital infrastructure significantly limits access to education, public services, and economic opportunities, and it also impedes the ability of communities to share and preserve cultural knowledge using contemporary tools. At the same time, Vaupés faces mounting environmental pressures. Between 2021 and 2023, the department lost approximately 7.7 thousand hectares of primary forest, driven in part by unsustainable agricultural practices, extractive industries, and the residual impacts of conflict and displacement ([Global Forest Watch, 2024](#)).

The logistical realities of reaching the communities in this region reflect and reinforce these structural exclusions. There are no roads connecting the departmental capital to the remote villages that form the core of this research. River transport remains an essential lifeline, but it is precarious and often slow, especially during the dry season. Most researchers, development professionals, and public officials travel by small aircraft, departing from Mitú, the capital city and only major urban center in Vaupés. For this project, our international research team assembled in Mitú after traveling from Seattle, Bogotá, and Villavicencio. Mitú's small regional airport functions as the gateway to the rest

of the department. Given the unpredictability of flights and weather, we typically planned a full day in Mitú to coordinate final logistics and account for potential delays.

Reaching the communities themselves required chartered Cessna flights and favorable flying conditions. These journeys, while short, usually 30 to 40 minutes, were highly dependent on the availability of skilled pilots and the ability to navigate cloud cover and wind patterns over dense rainforest. Planes landed on rudimentary dirt airstrips carved out at the edge of the forest, often just beyond the malocas. What might otherwise be a multi-day trek through thick jungle was replaced by a brief but precarious flight. Looking out over the sea of green, with the serpentine curves of the Vaupés River below, it is impossible not to be struck by the ecological scale and cultural resilience embedded in the landscape. This physical and infrastructural isolation is more than a logistical challenge; it is a defining feature of the ethical and methodological considerations that shape fieldwork in the region.

The primary collaborators in this research are two Indigenous associations that organize community governance along the Querarí and Yapú rivers: ASATIQ (Asociación de Autoridades Tradicionales Indígenas de Querarí) and ASATRIZY (Asociación de Autoridades Tradicionales Indígenas de la Zona del Río Yapú). These organizations are central to community development efforts in the region and are active participants in a REDD+ (Reducing Emissions from Deforestation and Forest Degradation) initiative coordinated with Wildlife Works, Fundación Colombia Multicolor, and the Universidad Nacional Abierta y a Distancia (UNAD).

ASATIQ encompasses 18 communities, primarily from the Cubeo people. Its work blends traditional ecological knowledge with strategies for food security, sustainable agriculture,

and conservation. Projects supported by ASATIQ include aquaculture systems, agroforestry, and training programs in biodiversity monitoring and environmental stewardship. These initiatives aim to reduce dependence on slash-and-burn agriculture and to foster culturally respectful forms of economic development. ASATIQ also promotes local self-governance, educational initiatives, and collective decision-making processes. ASATRIZY represents 8 communities, including Carapana, Tatuyo, Tucano, Bara, and Tuyuca peoples. Its development approach is similarly grounded in sustainable practices and intercultural governance. In addition to its environmental conservation work under the REDD+ framework, ASATRIZY supports training in climate change adaptation, gender equity, and youth leadership. Infrastructure development, such as educational facilities and improved transportation access, is a key component of its work. ASATRIZY also emphasizes inclusive participation, particularly the involvement of women in agroforestry and cultural revitalization projects.

The partnership with ASATIQ and ASATRIZY provided the foundation for the participatory training program *Diplomado en Liderazgo, Comunicación y Cambio Climático*, developed in collaboration with UNAD and academic researchers. Conducted between 2021 and 2022, the diplomado brought together approximately 100 Indigenous leaders across 25 communities for three week-long sessions. The program employed a suite of participatory methods that included participatory mapping, Photostories, and collaborative games such as Mayuk and Cachiveras, to support project development aligned with Indigenous territorial planning and cultural values. These methods not only helped generate context-specific tools for communication and planning but also reinforced long-term relationships built on mutual respect, transparency, and shared learning.

1.2 Significance and Scholarly Gap

Academia often measures research success through tenure and publication metrics, privileging grants, deliverables, and timelines that align with institutional and funder agendas. These cycles are frequently disconnected from the lived experiences of communities, particularly in regions marked by geographic isolation, limited infrastructure, and historical marginalization. In this structure, the imperative to “publish or perish” can undermine the long-term relationships necessary for meaningful collaboration. This model is especially fraught in engagements with Indigenous peoples, who have long histories of being studied as subjects rather than recognized as rights holders, collaborators, or co-researchers.

While information science has explored alternative approaches, many interventions still reproduce extractive dynamics. Community-based research, though often invoked, is not always practiced with integrity, particularly in projects in the global South. In the ICT for Development (ICT4D) space, for instance, numerous interventions have failed due to top-down implementation, unrealistic expectations, and a lack of sustained engagement (Dodson et al., 2012). Despite the rhetoric of empowerment and participation, projects often impose external timelines and technological solutions that do not align with community priorities.

NGOs face parallel challenges. In Latin America, NGO activity has shifted over the past seventy years, from Catholic charity institutions such as Caritas to liberation theology-inspired movements in the 1960s and 1970s, and later to the professionalized, technocratic models of the 1980s and 1990s. While these changes expanded organizational capacity, they also introduced tensions. Scholars such as Shannon Speed (2008b) and Maylei

Blackwell (2012) note that even rights-based and participatory frameworks can reproduce neoliberal logics, depoliticizing community struggles and reinforcing external control over resources.

In both academic and NGO contexts, a central question persists: where do the needs of the community fit within systems structured around external outputs, funding cycles, and institutional accountability? This dissertation responds to this gap by proposing and applying a dual participatory and rights-based evaluative framework for information science research. Drawing on participatory action research and a human rights-based approach developed by Claire Charters and Rodolfo Stavenhagen (Charters & Stavenhagen, 2009a) and grounded in the United Nations Declaration on the Rights of Indigenous Peoples (United Nations, 2008), this framework functions as both an ethical commitment and a practical tool to assess collaborative processes, institutional relationships, and project outcomes.

By centering the experiences of ASATIQ and ASATRIZY in Vaupés, Colombia, this research demonstrates how information systems can be developed and evaluated in ways that respect Indigenous governance, affirm cultural and territorial sovereignty, and align with locally defined visions of development. The integration of participatory and rights-based methods enables deeper analysis of how power is negotiated, how knowledge is valued, and how sustainability is envisioned by communities themselves.

1.2.1 Problem Statement

Indigenous communities across Latin America face persistent challenges in preserving cultural heritage, maintaining territorial autonomy, and pursuing sustainable development

in a rapidly digitizing world. These challenges are shaped by the enduring legacy of settler colonialism, which has historically suppressed Indigenous knowledge systems and undermined collective rights. In the digital era, new forms of exclusion have emerged, raising critical questions about how information systems are designed, implemented, and governed in Indigenous territories.

Despite frameworks such as the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), these principles are rarely operationalized in the design and use of digital tools, archives, and platforms. Indigenous peoples, comprising an estimated 50 million individuals across Latin America (World Bank, 2019), continue to face structural barriers to technology and to exercising control over their data and information systems. Recent UNESCO guidelines underscore the importance of Indigenous data sovereignty and call for meaningful participation throughout the development of information systems (González Zepeda & Martínez Pinto, 2023). Yet in practice, many systems, including archives, environmental monitoring tools, and digital maps, are still developed without community ownership, reproducing colonial power structures and threatening cultural autonomy.

This dissertation addresses these concerns by examining how participatory methodologies and human rights-based approaches can be combined to guide the design, implementation, and evaluation of information systems that support Indigenous governance, knowledge preservation, and community-defined development. It investigates:

- The challenges and opportunities involved in building collaborative partnerships between Indigenous authorities, NGOs, and academic institutions;

- The degree to which existing approaches to information systems align with the principles of Indigenous sovereignty and self-determination;
- The potential for participatory methodologies to bridge gaps between academic research and Indigenous ways of knowing;
- And the role of information systems in either reinforcing or disrupting colonial patterns of development and governance.

By focusing on collaborative work in the Vaupés region of Colombia, and drawing on comparative insights from Chiapas, Mexico, and Sucusari, Peru, this study offers a grounded analysis of how participatory action research, and a human rights-based framework can foster more ethical, culturally responsive practices in information science. It also contributes to broader efforts to decolonize research practice and reorient the field toward sustained, community-led engagement.

1.3 Theoretical Framework Preview

This dissertation is grounded in three intersecting frameworks: settler colonial theory, human rights-based approaches (HRBA), and participatory action research (PAR). Each offers distinct insights into the ethical, political, and epistemological dimensions of research with Indigenous communities, and together they provide a foundation for evaluating the collaborative development of information systems in the Vaupés region.

Settler colonialism, as articulated by Patrick Wolfe ([Wolfe, 2006](#)) and Lorenzo Veracini ([Veracini, 2011](#)), is not defined by singular acts of occupation but by a structure that aims to eliminate Indigenous presence in order to secure settler access to land and resources. In Colombia, the legacies of settler colonialism have taken specific forms, shaped by missionary activity, territorial reorganization, and the layering of state, religious, and extractive interests within Indigenous territories. This framework allows for an analysis of how historical and institutional forces continue to shape the conditions under which Indigenous communities must assert their rights, govern their territories, and engage with external actors.

The second framework, a human rights-based approach (HRBA), builds on the collective rights articulated in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). While the UNDRIP establishes important legal, albeit unenforceable, standards, this study draws specifically on the interpretation developed by Charters & Stavenhagen, which emphasizes development that is endogenous, participatory, equitable, self-managed, and grounded in cultural integrity. This rights-based lens is used here not only as a set of legal principles, but as a means to evaluate how research partnerships support, or fail to support, Indigenous self-determination, cultural survival, and long-term sustainability.

The third framework, participatory action research (PAR), provides methodological grounding for this study. Rooted in Latin American critical traditions and the work of Orlando Fals Borda ([Fals-Borda, 1987](#)), PAR insists that research must be co-designed with communities, driven by their priorities, and used as a tool for collective learning and

transformation. In the Vaupés context, PAR principles guided the co-development of participatory methods, including participatory mapping, Photostories, serious gameplay through Mayuk and an adapted Cachiveras board game, each of which supported inclusive dialogue, intergenerational exchange, and collaborative planning.

Together, these frameworks form a dual evaluative lens that informs both the design and analysis of the work presented in this dissertation. Settler colonial theory provides a structural understanding of the historical and institutional pressures Indigenous communities face. HRBA offers normative criteria for assessing whether development initiatives and information systems align with the rights of Indigenous peoples. PAR offers a methodological pathway for practicing research that is not only collaborative, but also accountable to the lived realities and governance systems of the communities involved.

This integrated framework enables a critical analysis of how participation is practiced, how rights are operationalized, and how information science research can support, and not undermine Indigenous autonomy. It also underpins the two core research questions: first, how participatory methods are structured and enacted in the development of information systems, and second, how these collaborative efforts and their outcomes can be evaluated through a combined participatory and rights-based approach.

1.4 Research Questions and Aims

This dissertation examines how participatory information-science collaborations between Indigenous communities, NGOs, and academic institutions can support decolonial

development and community-defined goals. Centering the Vaupés region of Colombia, the research explores how such collaborations are initiated, structured, and sustained, particularly in contexts shaped by historical marginalization, infrastructural exclusion, and Indigenous resilience. Partnerships with ASATIQ and ASATRIZY serve as the foundation for this inquiry, while comparative insight is drawn from earlier projects in Chiapas, Mexico, and Sucusari, Peru.

The study responds to long-standing critiques from Indigenous and decolonial scholars regarding the extractive tendencies of academic research and externally driven development interventions. As Speed (2008) and Smith (2012) have shown, efforts framed as participatory often fail to meaningfully redistribute power or challenge dominant epistemologies. Within information science, there is growing recognition of the need for more collaborative and ethically grounded approaches, yet the field continues to grapple with questions of authority, access, and sustainability, particularly in low-resource and culturally diverse settings. This research contributes to those conversations by examining how participatory methods are practiced on the ground, and how information systems can be designed and implemented in ways that align with Indigenous governance, values, and long-term visions.

The primary research question guiding this dissertation is:

RQ: How do collaborative information-science projects between Indigenous authorities (ASATIQ and ASATRIZY), NGOs, and academic institutions in Vaupés, Colombia, facilitate knowledge co-creation, advance decolonial practice, and support community-defined development goals?

To explore this central question, the study is organized around two interrelated subquestions:

RQ 1.1: What strategies are used to engage Indigenous communities in the co-design, management, and dissemination of information systems, and how do these strategies align with local governance structures and knowledge systems?

This subquestion addresses the mechanisms of collaboration, for instance, how participation is structured, what methods are used, and how cultural protocols and decision-making processes are incorporated into system design.

RQ 1.2: How can a dual participatory and rights-based framework be used to evaluate both the collaborative dynamics and the outcomes of these projects, including power relations, community benefits, and long-term sustainability?

This subquestion reflects the core analytical approach of this dissertation, integrating Participatory Action Research (PAR) and Human Rights-Based Approaches (HRBA) to assess how power, equity, and Indigenous self-determination are enacted throughout the research process and in the systems developed.

Together, these questions provide a framework for analyzing not only what participatory information-science projects do, but how they are negotiated, evaluated, and maintained within specific social and political landscapes. The research aims to contribute to a more grounded understanding of collaboration, one that centers Indigenous perspectives and recognizes the complexity of working across institutional and cultural boundaries.

1.5 Methodological Preview

This study adopts a Participatory Action Research (PAR) framework in combination with a Human Rights-Based Approach (HRBA) to examine how collaborative information-science

projects in Vaupés, Colombia, support knowledge co-creation, decolonial practice, and community-defined development. Drawing on foundational work by ([Charters & Stavenhagen, 2009](#); [Cochran et al., 2008](#); [Fals-Borda, 1987](#)), this dual framework emphasizes ethical accountability, collective rights, and community leadership in both the design and evaluation of research processes. PAR calls for participation at all stages of research, the co-production of knowledge, action rooted in local priorities, and continuous reflexivity. HRBA, grounded in the principles articulated in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), provides normative criteria for evaluating whether research supports Indigenous sovereignty, cultural continuity, and self-determined development.

The participatory methods implemented in Vaupés were selected and adapted to align with these principles and to support the two core research questions outlined in Section 1.4. To understand how Indigenous communities engage in the co-design, management, and dissemination of information systems the research employed participatory mapping, serious games, and photohistories. These tools facilitated the collective identification of territorial resources, social priorities, cultural symbols, and local communication practices. They also enabled reflection on how information flows and systems could be shaped by and for the communities involved.

To evaluate how these collaborations function and what outcomes they produce the study incorporated semi-structured interviews, focus groups, participant observation, and participatory planning sessions. These formats supported deeper reflection on institutional relationships, internal community dynamics, perceptions of project value, and the planning of future initiatives. Participant observation throughout the diplomado process provided

additional insight into communication practices, leadership structures, and collective decision-making, allowing for a more nuanced analysis of power, participation, and sustainability.

While earlier participatory initiatives in Chiapas, Mexico, and Sucusari, Peru helped inform cultural and regional insights, as well as the initial development of the methodological toolkit, the research design and primary analysis focus exclusively on the work in Vaupés. These earlier projects are referenced selectively to offer contrastive insight into the conditions, practices, and institutional arrangements that helped inform the Vaupés collaboration.

Researcher Positionality

As a bilingual scholar of Mexican descent based in the United States, I approach this research with cultural familiarity and institutional distance. I do not speak Indigenous languages and have no direct ties to the communities in Vaupés beyond those developed through long-term engagement. Reflexivity has informed each stage of this project, from design and implementation to analysis and dissemination. My positionality shapes how I interpret and represent this work, and I remain accountable to the communities and organizations that have entrusted me with their collaboration.

Methods Used in Vaupés

Table 1.1 summarizes the data collection methods applied during fieldwork in Vaupés. These were developed in coordination with ASATIQ and ASATRIZY as part of a broader participatory training and development process.

Table 1.1 Methods Used during Diplomado

Method	Purpose
Photohistories	Visual storytelling to document cultural practices and environmental concerns.
Participatory Mapping	Collective mapping of territorial knowledge, infrastructure, and resource flows.
Serious Gameplay	Collaborative dialogue on cultural values, community practices, and generational change.
Semi-Structured Interviews	Capturing perspectives of elders, youth, and leaders on collaboration, governance, and development.
Small Group Dialogues	Facilitating structured conversations during mapping, planning, and project evaluation sessions.
Participant Observation	Observing interactions, workshop facilitation, and everyday engagement as part of embedded, reflexive participation.

All fieldwork was conducted in Spanish, with interpretation into Indigenous languages supported by community facilitators when needed. Visual and spatial methods proved particularly effective in enabling intergenerational and multilingual participation.

Institutional partners including Fundación Colombia Multicolor, Wildlife Works, and UNAD, played central roles in coordination, facilitation, and implementation. Their involvement supported project logistics and delivery, while also shaping expectations around timing, visibility, and reporting. The influence of these institutions is part of the broader analysis of cross-sector collaboration presented in this dissertation.

In keeping with the PAR framework and rights-based principles, these methods were not developed to extract knowledge, but to support community-led inquiry, planning, and decision-making. The approach reflects a commitment to collaborative practice guided by the ethical obligations of engaged scholarship. These methods are discussed further in

Chapter 3, where the full research design, implementation process, and analytic framework are presented in detail.

1.6 Roadmap of the Dissertation

The chapters that follow build on the ethical commitments, research context, and theoretical orientation introduced here. Together, they examine how participatory information-science projects unfold within Indigenous territories, particularly in Vaupés, Colombia, and how such collaborations can be structured to support cultural continuity, collective governance, and long-term, rights-based development.

Chapter 2. Frameworks for Rights, Resistance, and Knowledge outlines the conceptual and ethical scaffolding of the dissertation. It brings settler colonial critique, participatory action research, and a human rights-based approach into conversation to guide the analysis of research design, collaboration, and accountability. Rather than treating these as separate frameworks, the chapter examines how their tensions and overlaps inform the dissertation's approach to method, power, and knowledge.

Chapter 3. Grounding the Work: Methods, Ethics, and Collective Process traces the development and implementation of the Diplomado en Liderazgo, Comunicación y Cambio Climático, a participatory training program co-designed with ASATIQ and ASATRIZY. It describes the structure of the program, the pedagogical tools employed, like participatory mapping, photohistories, and serious gameplay, and the collaborative processes that guided territorial planning and project development.

Chapter 4. Applying a Human Rights-Based Framework to Participatory Information Science Research analyzes the relationships, negotiations, and challenges that emerged

during the diplomado process. Drawing on reflections from community participants and institutional facilitators, it explores how PAR and HRBA were enacted, where tensions arose, and how gendered and intergenerational dynamics shaped participation and learning. The chapter also reflects on the structural limits and institutional boundaries that influenced the project.

Chapter 5: What the Work Reveals synthesizes the findings through the dual interpretive lens of participatory action research and the human rights-based approach. It examines how participatory practices aligned with Indigenous governance structures, evaluates the collaborative integrity of the project, and situates the work within broader political and institutional contexts. The chapter also addresses the limitations of scope and the evolving nature of long-term partnerships.

Chapter 6. Conclusion: Research as Responsibility concludes by proposing a shift in how impact is understood and assessed in participatory information science. Rather than focusing on technical outputs or external validation, it emphasizes process-based indicators such as trust, alignment with cultural values, and the capacity for sustained collaboration. The chapter outlines recommendations for researchers, NGOs, and funders committed to relational, rights-based, and culturally grounded work.

Together, these chapters offer a critical and situated account of how information science research can be practiced in solidarity and in partnership with Indigenous communities. This work contributes to interdisciplinary conversations across information science, Indigenous studies, and development, advocating for research that is accountable, co-produced, and aligned with community priorities and commitments.

Chapter 2: Frameworks for Rights, Resistance, and Knowledge: *Settler Colonialism, Indigenous Sovereignty, and Participatory Research*

2.1 Introduction: Framing the Theoretical Landscape

This chapter lays the theoretical and contextual foundation for the dissertation. It brings together several analytical frameworks such as settler colonialism, Indigenous knowledge systems, Indigenous data sovereignty, the human rights-based approach (HRBA), and participatory action research (PAR), that shape how participatory information science projects are understood, implemented, and evaluated in Indigenous territories. These frameworks emerged from distinct intellectual genealogies but offer powerful insights when brought together. They illuminate different dimensions of the same underlying problem: how knowledge, power, and technology are entangled in colonial and postcolonial relations that continue to structure development practice and information systems.

While this research is grounded in the lived experiences and collaborative efforts of communities in Vaupés, Colombia, its analytical framing draws from broader scholarship on historical injustice, epistemic exclusion, and participatory design. The theoretical tools presented here are not applied uniformly. Instead, they are engaged in dialogue with one another, sometimes overlapping and sometimes tensioned, to surface the political, ethical, and institutional dynamics that shape information practices in Latin America.

Settler colonialism, as articulated by Wolfe ([Wolfe, 2006](#)), is understood not as a past event but as a persistent structure that eliminates and replaces Indigenous worlds through a

logic of elimination. In Latin America, this logic operates through development policies, environmental governance, legal regimes, and national narratives of mestizaje and multiculturalism. Participatory technologies and data infrastructures such as censuses, mapping platforms, or digital archives, can be vehicles of either empowerment or erasure, depending on how they are designed and governed. Understanding the structural conditions of settler colonialism is essential for evaluating whether such tools reinforce extractive and hierarchical relationships or contribute to Indigenous resurgence.

Indigenous knowledge systems offer a vital counterpoint. These systems, grounded in relationality, land-based learning, and intergenerational memory, challenge the dominance of codified, decontextualized knowledge favored by mainstream information science. Their exclusion is not accidental but systemic and a reflection of what Miranda Fricker has termed “epistemic injustice.” ([Fricker, 2007](#)) Bringing these systems into participatory design processes is not a matter of inclusion alone; it demands shifts in the values, assumptions, and infrastructures that govern how information is produced, shared, and stored.

The concept of Indigenous data sovereignty builds directly on this critique. It asserts the right of Indigenous communities to define the terms under which data about their lands, cultures, and lives are collected and used. ([Kukutai & Taylor, 2016](#); [D. E. Smith, 2016](#)) As González Zepeda and Martínez Pinto ([González Zepeda, Luz Elena, Martínez Pinto, Cristina Elena, 2023](#)) argue, data governance is not only a technical or ethical matter, but a condition of survival. In territories where digitization often means extraction or

surveillance, participatory information systems must actively center Indigenous control, representation, and accountability.

To navigate these tensions, this study adopts a human rights-based approach (HRBA) informed by Charters & Stavenhagen ([Charters & Stavenhagen, 2009](#)) and the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) ([United Nations, 2008](#)). HRBA offers a normative and evaluative lens that frames Indigenous peoples not as beneficiaries of development, but as subjects of collective rights. This approach emphasizes principles such as free, prior, and informed consent, culturally appropriate governance, democratic accountability, and self-management. These principles provide not only ethical commitments, but also structural criteria for assessing research partnerships and technology design in Indigenous contexts.

Participatory action research (PAR) serves as the methodological foundation that links these frameworks to practice. Rooted in the Latin American tradition of Fals Borda ([Fals-Borda, 1987](#)), PAR centers collective inquiry, iterative reflection, and social transformation. It begins from the premise that research must be co-defined and co-produced by communities and researchers together. In the field of information science, PAR challenges dominant models of design and datafication that too often exclude community agency. Instead, it offers a pathway for collaborative, context-sensitive, and culturally grounded systems development.

These frameworks are not simply layered for breadth. Each contributes a necessary dimension: settler colonialism offers structural critique, HRBA defines normative direction, and PAR provides methodological process. Together, they allow for a situated analysis of

how information systems are imagined, contested, and reshaped in the context of Indigenous governance.

The sections that follow engage each framework in more detail, drawing from Latin American scholarship, critical theory, and applied practice. By elaborating on these foundations, this chapter equips readers to understand the theoretical commitments that guide this dissertation, and to see how the empirical chapters that follow build upon them to examine collaboration, technology, and self-determination in Vaupés and beyond.

2.2 Settler Colonialism and the Politics of Knowledge

To understand the conditions under which participatory information-science projects unfold in Latin America, it is essential to recognize settler colonialism not as a historical backdrop but as an enduring structure. Settler colonialism refers to a system of domination that seeks to erase Indigenous presence and replace it with a settler society. Patrick Wolfe (2006) defines it as operating through a “logic of elimination,” often enacted not through overt violence but through legal, cultural, and institutional mechanisms that sever Indigenous peoples from their lands, knowledge systems, and political authority.

In Latin America, settler colonialism has taken multiple forms, shaped by histories of conquest, Catholic conversion, racial mixing (*mestizaje*), and state-building. From colonial regimes to contemporary governments, the settler project has relied on policies of forced assimilation, extractive development, and the imposition of Western epistemologies. These policies include legal systems that ignore Indigenous jurisprudence, education programs that marginalize Indigenous languages, and environmental laws that undermine territorial

governance ([Blackwell, 2012](#); [Lozano Flores et al., 2024](#); [von der Porten et al., 2015](#))

Despite state discourses of multiculturalism and inclusion, national development agendas in countries such as Colombia, Mexico, and Peru continue to prioritize resource extraction and infrastructure expansion at the expense of Indigenous sovereignty. ([Youdelis et al., 2021](#))

Shannon Speed advances this analysis by challenging the assumption that Latin America lies outside the scope of settler colonial studies ([Speed, 2017](#)). She argues that Latin American states are settler colonial in form and function, even if rarely theorized as such. Drawing from Wolfe, Speed expands the framework by highlighting the region's particular racial and economic dynamics. Mestizaje, she notes, functioned not only as a cultural identity project but as a strategy of assimilation and erasure. Neoliberal development policies further entrench settler logics by transforming land and knowledge into commodified assets, dispossessing Indigenous communities through legal and market-based mechanisms.

Taylor and Lublin similarly critique the Anglo-centric lens of much settler colonial scholarship ([Taylor & Lublin, 2021](#)). They argue that key concepts must be translated, linguistically and epistemologically, when applied to Latin America. Their call for a dialogic relationship between Latin American studies and settler colonial theory emphasizes the need to account for enduring Indigenous polities, varied land tenure systems, and the outsized role of religious institutions in colonial governance. These contributions provide essential grounding for analyzing how information systems are introduced and contested in contexts like Vaupés.

Across the regions of Vaupés, Chiapas, and Sucusari, the structural effects of settler colonialism are embedded in daily life. Indigenous communities navigate complex relationships with states, NGOs, and religious actors that have long influenced territorial governance and cultural life ([Blackwell, 2012, 2017; A. Smith, 2017](#)). While some collaborations offer spaces for mutual learning, others reproduce hierarchies in which Indigenous participants are framed as beneficiaries or data sources rather than co-creators. These dynamics are not incidental but often built into institutional design and funding structures that prioritize short-term deliverables over long-term accountability ([Hawk, 2017; King & Osayande, 2017; A. Smith, 2017](#)).

Digital and informational technologies, in this context, are not neutral tools. Technologies such as participatory mapping, digital archives, and communication platforms can either reinforce settler colonial logics or open new pathways for Indigenous resurgence, depending on how they are designed, governed, and interpreted. Kukutai and Taylor warn that development and data infrastructures often frame Indigenous communities as objects of intervention, especially when data is stored externally, interpreted without local input, or mobilized to serve outside agendas. ([Kukutai & Taylor, 2016](#)).

Top-down development interventions and information systems risk replicating epistemic hierarchies that Indigenous communities have resisted for generations ([Giovannini, 2016](#)). Tools such as satellite mapping or mobile surveys can become instruments of surveillance and control when not rooted in local governance structures or knowledge practices ([A. Smith, 2017](#)). These concerns echo the arguments of decolonial thinkers such as Aníbal Quijano and Walter D. Mignolo, who highlight how the “coloniality of power” persists through

knowledge regimes that marginalize non-Western epistemologies. Quijano's concept underscores how domination operates through both material and symbolic systems, while Mignolo calls for epistemic delinking, or a conscious rejection of Eurocentric paradigms in favor of relational, land-based ways of knowing. ([Mignolo, 2007; Quijano, 2024](#))

The stakes of knowledge production in Indigenous territories are thus political. As Smith has argued, research itself can become a colonial instrument when it ignores Indigenous cosmologies, governance systems, and epistemological authority. Framing collaboration as “capacity building” or “knowledge transfer” without community control risks reproducing what Smith calls “research through imperial eyes” ([L. T. Smith, 2012](#)).

Yet settler colonialism has never gone uncontested. Indigenous communities across Latin America have maintained their languages, revitalized traditional practices, and advanced autonomous governance models that reject state-centric frameworks. In Chiapas, the rise of Zapatista autonomy reflects a direct challenge to neoliberal development and settler rule. Speed ([Speed, 2008a](#)) documents how these communities have strategically engaged international human rights discourses while constructing their own institutions outside state control.

In Vaupés, community governance associations like ASATIQ and ASATRIZY exemplify similar forms of resistance and innovation. Their leadership in environmental stewardship, cultural revitalization, and information-system design reflects not only pragmatic engagement with external actors but deep commitments to cosmologies that entwine land, language, and collective identity. Their participation in digital and participatory projects is

not passive; it is tactical, rooted in intergenerational learning and grounded in their own forms of authority.

Framing participatory information science within settler colonial critique reveals what is truly at stake. Collaboration is not merely a technical or ethical matter; it is a political process shaped by histories of dispossession and struggle. Academic institutions, NGOs, and funders must reckon with how their models of partnership and evaluation either reproduce or challenge these dynamics. Recognizing the persistence of settler colonial structures prepares us to ask better questions about how information systems and development initiatives are designed, for whom, and to explore how they might instead serve Indigenous futures.

2.3 Indigenous Knowledge Systems and Information Practice

Indigenous knowledge systems are complex, place-based frameworks grounded in relationships with land, community, and cosmos. Transmitted through oral histories, ritual, ecological observation, and intergenerational learning, these systems shape governance, spiritual practice, and collective wellbeing. Far from being static, they are dynamic and adaptive, evolving in response to lived experience and environmental change ([Duarte & Belarde-Lewis, 2015; Nakata et al., 2005](#)).

Yet dominant models of information science have historically marginalized or misrepresented these systems. Rooted in Western epistemologies, conventional information practices often prioritize formal documentation, fixed categories, and individual authorship. Such practices tend to treat Indigenous knowledge as data to be

extracted, decontextualized, and archived, rather than as living systems of meaning that are relational, collective, and situated ([Becvar & Srinivasan, 2009](#); [Callison et al., 2016](#); [Nakata et al., 2005](#)). This has contributed to a persistent pattern of epistemic injustice and exclusion.

The work presented in this dissertation takes a different approach and is informed by Indigenous research methodologies and the work of scholars such as Smith and Shawn Wilson ([L. T. Smith, 2012](#); [Wilson, 2008](#)). However, it centers Indigenous ways of knowing, being, and doing within participatory information practices. This orientation foregrounds relational accountability, cultural protocol, and community benefit. It also demands reflexivity: researchers must situate themselves within the work and be accountable to the values, priorities, and leadership of the communities they are engaging with.

In the Vaupés region of Colombia, these commitments shaped the design and facilitation of the participatory diploma program co-developed with ASATIQ and ASATRIZY. Supported by Fundación Colombia Multicolor, Wildlife Works, UNAD, and the University of Washington, the program prioritized culturally grounded pedagogies. Participatory methods such as mapping, Fotohistorias, and Mayuk were not only tools for data collection but also forms of intergenerational dialogue, memory activation, and strategic planning. Rooted in local cosmologies and governance structures, these tools supported Indigenous leadership in cultural preservation, environmental stewardship, and community development.

Similar values informed earlier collaborations in Chiapas and Peru. In Chiapas, Tseltal communities worked with the One Equal Heart Foundation and Jesuit partners to create a

participatory information system grounded in the concept of *Lekil Cuxlejalil*, or “buen vivir” which represents “a good life” in holistic way. This system integrated a community library, radio, and storytelling practices to strengthen education and cultural transmission while navigating fragmented infrastructure and political challenges ([Gomez et al., 2018](#)). Rather than importing technology, the project embedded new tools within Tseltal epistemologies and social structures.

In the Peruvian Amazon, Gilmore and Young worked with Maijuna communities to create participatory maps that documented culturally and ecologically significant territories ([Gilmore & Young, 2010](#)). These maps were not neutral representations but reflections of collective memory and political agency. The participatory process itself reinforced community identity and generated tools for legal advocacy. Later work by Gilmore and Wingfield emphasized the ongoing role of story, biodiversity, and memory in sustaining resilience in Sucusari ([Wingfield & Gilmore, 2021](#)).

Across these diverse contexts, no single method or platform defines participatory information work. What unites these examples is an orientation: information systems must resonate with Indigenous epistemologies and support cultural transmission. Mapping, photography, oral history, and analog serious gameplay are powerful not because of their format, but because they are embedded in systems of meaning, responsibility, and care.

Indigenous communities are already managing sophisticated knowledge systems that are encoded in language, land, ceremony, and everyday life. The task of information science is not to reformat these systems for new platforms, but to learn how to accompany and

support them on their own terms. This requires participatory design, shared decision-making, and accountability to community-defined visions of the future.

In Vaupés, information tools were developed through dialogue and co-design with Indigenous leaders. They were introduced not as neutral interventions but as culturally situated practices, often analog or visual, and aligned with local planning and intergenerational learning. In this context, information practice became more than a technical process. It became a site of cultural continuity and political negotiation and an instrument not only for knowledge preservation but for advancing self-determined development.

2.4 Human Rights-Based Approaches and Indigenous Sovereignty

The human rights-based approach (HRBA) provides a normative and evaluative foundation for research and development practices that engage with Indigenous communities.

Grounded in international human rights law, HRBA affirms the rights of Indigenous peoples to participate in decisions that affect them, to maintain and govern their cultural heritage and knowledge systems, and to define their own development priorities. Rather than framing Indigenous communities as recipients of aid or knowledge transfer, HRBA positions them as subjects of collective rights.

This approach builds on the principles articulated in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), adopted by the UN General Assembly in 2007.

UNDRIP outlines a comprehensive framework of rights, emphasizing self-determination, territorial integrity, and cultural autonomy. Article 31 affirms the right of Indigenous

peoples “to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions,” including intellectual property protections. Article 23 declares their right “to determine and develop priorities and strategies for the development or use of their lands or territories and other resources,” including the administration of programs through their own institutions ([United Nations, 2008](#))

These provisions provide a legal and ethical basis for participatory information science projects that respect Indigenous sovereignty and governance. But beyond legal codification, HRBA offers an actionable framework for evaluating whether development and research initiatives genuinely support Indigenous control, equity, and cultural survival.

Building on UNDRIP, Charters and Stavenhagen developed a set of interdependent principles to guide HRBA implementation in Indigenous contexts. ([Charters & Stavenhagen, 2009](#)) Their framework defines Indigenous peoples as collective rights-holders and asserts that development must emerge from within communities and be evaluated according to its contributions to long-term self-determination.

Table 2.1 HRBA Principles for Development Within Indigenous Context*(Adapted from Charters & Stavenhagen, 2009)*

Principle	Definition
Endogenous	Development must originate from within the community and respond to its collectively defined priorities.
Participatory	All stages must include Indigenous participation, grounded in free, prior, and informed consent.
Socially Responsible	Projects must address community-identified needs and support empowerment.
Equitable	Benefits must be distributed fairly across the community, reducing internal disparities.
Self-Sustaining	Initiatives should contribute to long-term improvements in quality of life.
Sustainable & Environmentally Protective	Development must preserve ecological balance and promote environmental stewardship.
Culturally Appropriate	Efforts must align with cultural values, languages, and knowledge systems.
Self-Managed	Decision-making and resources should be governed by the community's own institutions.
Democratic	Development must support democratic participation and pluralistic governance.
Accountable	All actors must report transparently to communities and uphold mutual accountability.

This framework does more than prescribe ethical practice. It provides a structured lens for evaluating development and research processes, with criteria rooted in international law and Indigenous self-determination. It allows communities, researchers, and institutions to negotiate participation, data governance, and implementation on shared terms that reflect collective rights.

Scholars such as Michela Giovannini have expanded on these principles by examining how Indigenous-led development operates in practice. Her research on community enterprises

in Chiapas demonstrates how such initiatives resist externally imposed models that prioritize efficiency over cultural relevance. Instead, they center on *buen vivir* or “living well” a concept rooted in balance, relationality, and collective care ([Giovannini, 2016](#)). These enterprises are not merely economic strategies, but holistic expressions of Indigenous worldviews.

Together, this work highlights a core insight: development must be grounded in community governance, cultural values, and relational accountability. The HRBA becomes not just a legal obligation, but a philosophical and political stance and one that reorients research and information practices toward Indigenous priorities and terms of engagement.

This stance is especially important in Latin America, where development has often served as a mechanism of settler rule. As Richard Gott argues, the region’s history as a white settler society was reinforced by constructs such as *Latinidad*, which erased Indigenous and Afro-descendant histories in the formation of national identities ([Gott, 2007](#)). The HRBA offers a tool for disrupting these logics by affirming collective rights and resisting assimilationist paradigms.

Taken seriously, HRBA challenges the assumptions of neutrality and technical expertise that often shape academic and development work. It requires institutions and researchers to ask not only *what* is being done, but *who decides*, *who benefits*, and *whose knowledge counts*. In this dissertation, HRBA is not simply an ethical backdrop; it is a critical lens for evaluating how participatory information systems are designed, implemented, and governed; and whether they truly support Indigenous autonomy and cultural survival.

2.5 Participatory Action Research and the Ethics of Engagement

Participatory Action Research (PAR) serves as both a methodological foundation and an ethical orientation throughout this dissertation. At its core, PAR treats research as a collaborative, situated practice and one that responds to the conditions, priorities, and knowledge systems of those most impacted by structural inequality. It challenges conventional research hierarchies by affirming that those typically positioned as “subjects” are, in fact, co-producers of knowledge and agents of transformation.

The foundations of PAR are deeply rooted in Latin American political and intellectual traditions, particularly the work of Colombian sociologist Orlando Fals Borda. Fals Borda conceived of PAR not merely as a methodology but as a revolutionary praxis: an integration of social inquiry, political education, and collective action in service of the oppressed. His concept of the *dialogo de saberes*, or the dialogue of knowledges, rejected the binary between expert and local knowledge, instead calling for research that reinforces local capacities and strengthens self-determination through participatory decision-making and community governance ([Fals-Borda, 1987; Gavazzo et al., 2018; Pérez & Echeverri, 2010](#)).

PAR is global and diverse, and within the Information Science field differentiated iterations of participatory methods exist such as Participatory Design, HCI, etc. ([Muller, 2003](#)), however, Latin American contributions have been central to its ethical grounding and resistance to settler colonial legacies. McIntyre emphasizes that PAR requires deep reflexivity, sustained dialogue, and attention to the power asymmetries embedded in research relationships ([McIntyre, 2007](#)). For McIntyre, PAR involves iterative cycles of collective investigation, reflection, and action as an approach that aligns closely with the

participatory methods used throughout the workshops in Vaupés, including participatory photography (Photostories), social/participatory mapping, and serious games like Mayuk and Cachiveras.

These methods were not chosen solely for their data-gathering potential. They were designed to support intergenerational learning, project planning, and cultural affirmation within the Leadership, Communication, and Climate Change *Diplomado* program.

Developed in collaboration with the communities that comprise ASATIQ & ASATRIZY, Fundación Colombia Multicolor, Wildlife Works, UNAD, and the University of Washington, this initiative rooted information practices in community-defined goals, strategy, and capacity building.

PAR and HRBA share a commitment to participation, accountability, and community control, but they function in distinct ways. Where HRBA offers a normative and legal framework grounded in collective rights, PAR provides a flexible methodological process for realizing those rights in practice. It helps operationalize HRBA's principles by supporting collaborative design, shared decision-making, and iterative adaptation based on community feedback. In contexts marked by settler colonial legacies and systemic exclusion, this alignment is not optional, it is essential.

Within information science, PAR offers a corrective to technocratic, extractive, and often depoliticized research paradigms. It challenges assumptions of neutrality and disembodied knowledge production, instead foregrounding situated ethics, historical context, and Indigenous epistemologies. Throughout this work, PAR is not treated as a technical toolkit

but as a mode of relational engagement that is rooted in trust, reciprocity, and accountability to community-defined visions of the future.

These participatory methods reveal tensions, clarify priorities, and create space for planning grounded in lived experience. For example, the Mayuk and Cachiveras games use serious play to surface community values, myths, cultural universes, and preferred communication strategies. These tools move beyond information extraction; they support dialogic planning and political expression.

PAR also demands an explicit reckoning with the researcher's positionality. As Speed notes, activist research must navigate tensions between advocacy and analysis, and between immediate action and long-term consequences ([Speed, 2008b](#)). This dissertation embraces that tension, approaching research as a process of trust-building and shared navigation rather than expert-driven intervention. The goal is not to resolve contradictions but to make them visible and actionable through participatory practice. The work draws from decolonial theory but remains anchored in PAR's emphasis on co-production, reflexivity, and embedded engagement.

Ultimately, PAR in this dissertation is not a method among others, rather it is a political and ethical stance that reflects a commitment to epistemic justice, community-led development, and the transformation of research itself.

2.6 Institutional Engagements in Indigenous Territories

The role of non-governmental organizations (NGOs) in Latin America has deep historical roots and has evolved significantly over the decades. In their earliest iterations, NGOs were

often linked to religious institutions, particularly the Catholic Church, which established social assistance organizations like Caritas in the 1950s. These early NGOs focused on social welfare and were primarily involved in providing basic services and charity work ([Blackwell, 2012; Lopes de Oliveira & Lewenstein, 2023; A. Smith, 2017](#)). We see elements of these early roots in the relationships between the Jesuit Mission and the Tseltal communities in Chiapas, Mexico. Eugenio Maurer, SJ, author of *Los Tseltales*, arrived as a young priest in the 1950s and dedicated his life to working with the local communities in and around Bachajón ([Maurer, 1984](#)).

As time progressed into the next decade, the rise of liberation theology in the 1960s and 1970s and increased political activism led to the formation of more politically engaged NGOs. These organizations began to focus on human rights, social justice, and grassroots empowerment, often in response to oppressive regimes and social inequalities. Liberation theology emphasized critical reflection and political action by the poor, which influenced many NGOs to adopt more activist roles. ([R. L. Harris et al., 2008; Reyes & Kaufman, 2011](#)) The debt crisis and economic challenges of the 1980s promoted significant growth in the number of NGOs. International funding increased, and NGOs began to fill gaps left by struggling governments. This period also saw NGOs becoming more involved in development work and advocating for policy changes. The U.S. government, for example, funneled funds through NGOs for development projects in Central America as part of broader geopolitical strategies ([Blackwell, 2017; Lopes de Oliveira & Lewenstein, 2023](#)).

With the democratization of many Latin American countries in the 1990s, NGOs started to play more collaborative roles with governments. They began focusing on a wide range of

issues, including environmental conservation, Indigenous rights, and gender equality. This period also saw the professionalization of NGOs and their integration into international networks, enhancing their capacity and influence. Overall, the development of NGOs in Latin America has been shaped by a combination of religious influences, political activism, economic crises, and international support. These organizations have transitioned from providing basic services to engaging in complex development and advocacy work, reflecting the region's evolving social and political landscape.

Fundación Colombia Multicolor aims to strengthen the role of community media in promoting peace and democracy in Colombia. This organization supports over 50 community radio stations and other media outlets by providing training and resources. SIPAZ works to ensure that communities have access to accurate information and can participate in the democratic process, fostering a culture of peace and social justice through communication. Led by Mauricio Beltrán, this work and these organizations were instrumental in the development of the community radio station project in Chiapas.

Wildlife Works, established by Mike Korchinsky, focuses on forest conservation in Colombia through the REDD+ mechanism (Reducing Emissions from Deforestation and Forest Degradation). REDD+ is a United Nations-backed framework that helps countries prevent deforestation and forest degradation, which are significant contributors to global carbon emissions ([What is REDD+?, n.d.](#)). Wildlife Works implements these projects by creating conservation programs that provide sustainable development benefits to local communities, thereby aligning ecological needs with economic incentives. In Colombia, their projects involve direct action such as reforestation, wildlife monitoring, and

developing carbon offset initiatives that allow businesses and individuals to invest in forest conservation in exchange for carbon credits. These initiatives aim to help mitigate climate change, protect the region's rich biodiversity, and support the livelihoods of local populations through job creation and community development programs ([Rodríguez-de-Francisco et al., 2021](#)).

Academic research institutions also play a central role in shaping Indigenous development trajectories, often acting as both collaborators and historical agents of colonial knowledge production. The University of Washington Information School (UW iSchool) and Colombia's Universidad Nacional Abierta y a Distancia (UNAD) illustrate these institutional dynamics from different yet interconnected vantage points.

The UW iSchool, originally established in 1911 and renamed in 2001, now offers a comprehensive range of degrees in informatics, information management, and librarianship. The school is also a leader in research that explores the intersection of technology and society. Notably, it conducts research aimed at supporting social change and has recently launched a focus on Native North American communities. This includes developing information services tailored to their unique needs, preserving Indigenous knowledge through digital archives, and studying the social impacts of technology within these populations.

Established in 1982, UNAD provides distance education across Colombia, focusing on adult learners and professionals. It offers programs in education, engineering, health sciences, and more, delivered through online platforms and regional centers. UNAD's research frequently addresses educational technology and innovative methods that promote social

change, especially in remote and underserved areas. While UNAD primarily serves Colombian communities, its mission and research align with broader goals of educational accessibility in challenging environments.

Understanding these institutional dynamics is critical for researchers in information science. As Harris notes, Latin America's rural poverty stems from deeply entrenched structural inequalities, including exclusion from markets, credit, and decision-making processes. Development initiatives and information systems cannot be viewed as neutral in this context as they are embedded in histories of colonialism, land dispossession, and epistemic erasure. To design ethical, participatory, and community-serving information systems, scholars must grapple with the legacies and power structures of NGOs, academic institutions, and state actors. ([R. L. Harris et al., 2008](#); [R. W. Harris, 2016](#); [Lozano Flores et al., 2024](#); [Schroeder & González, 2019](#))

In this framing, NGOs and academic researchers are not merely helpers or allies. They are also participants in the reproduction of settler logics when they impose developmentalist agendas or disregard Indigenous sovereignty. A critical engagement with these institutions, then, is not optional, rather it is a necessary condition for ethical research and practice in contexts where development and information systems converge.

2.7 Conclusion: Toward More Inclusive Information Science Research

This chapter examines the conceptual and institutional foundations that inform the dissertation's approach to ethical and participatory research in information science.

Drawing from frameworks of settler colonial studies, the human rights-based approach

(HRBA) to development, and participatory action research (PAR), the discussion has emphasized the need for approaches that are grounded, collaborative, and accountable to communities.

Understanding settler colonialism as an enduring structure, rather than a historical event, is essential for interpreting the relationships between research institutions, development organizations, and Indigenous communities. Speed reminds us that Latin American states are not postcolonial in any simple sense; they continue to operate as settler colonial states where Indigenous sovereignty is systematically undermined. This framing compels information science researchers to interrogate how data, archives, and technologies participate in broader systems of dispossession and control. It reveals that technical systems are never neutral as they are historical and political formations that can either sustain colonial hierarchies or be retooled to support resurgence and resistance.

The human rights-based approach to development, as articulated by Charters and Stavenhagen, offers a complementary framework that foregrounds principles of participation, accountability, and self-determination. It asserts the collective rights of Indigenous peoples and establishes concrete standards for ethical collaboration. When linked with engaged scholarship and PAR, HRBA becomes not only a normative stance but a set of actionable commitments that shape research design, partnerships, and outcomes. While settler colonial perspectives identify structural harm, HRBA provides a legal and ethical vocabulary for challenging that harm within institutional systems. This gives us clear principles that can guide the evaluation of research relationships, not just their outcomes.

Participatory action research, as explored through the work of Fals Borda and McIntyre, centers long-term collaboration, reflexivity, and the co-production of knowledge. It challenges extractive models of research and aligns with epistemologies that value lived experience, historical memory, and community-defined priorities. In the context of information science, PAR offers a methodology that is not only responsive but also transformative, creating space for communities to participate in shaping the tools and systems that affect their lives. Where a settler colonial lens diagnoses and HRBA evaluates, PAR activates change. It provides the participatory mechanisms through which ethical commitments become lived practice.

Together, these three frameworks offer more than critical awareness or procedural reform. They support a practice of information science research that is historically informed, rights-driven, and participatory in both form and intent. This triadic lens helps to reframe the role of the researcher, not as a neutral intermediary or benevolent expert, but as a situated actor embedded in complex power relations. It also recasts development initiatives and information systems, not as universal infrastructures, but as socially and culturally constructed tools whose meaning and impact depends on who designs them, who governs them, and to what end.

These frameworks do not constitute a comprehensive solution or a universal approach to research. Rather, they offer one viable and respectful path for working in partnership with Indigenous communities in this case, within the context of Latin America. The approaches outlined in this chapter are grounded in decades of interdisciplinary scholarship and on-

the-ground collaboration. They demand humility, patience, and a willingness to engage with complexity rather than bypass it.

The next chapter turns to the empirical dimensions of this work. Chapter 3 will detail the methodological choices that guided the research in Colombia. It will show how the frameworks discussed here were put into practice, and how they informed the selection of methods, the formation of partnerships, and the interpretation of findings. As that chapter will demonstrate, the strength of participatory and rights-based approaches lies not only in their theoretical grounding but in their capacity to support meaningful and context-sensitive research.

Chapter 3. Grounding the Work: Methods, Ethics, and Collective Process

Participatory Research in the Vaupés Region of Colombia

3.1 Introduction

This chapter outlines the research design and methodological commitments that guided the dissertation's central case study: a participatory action research (PAR) project conducted in Vaupés. Grounded in long-term collaboration between Indigenous organizations, non-governmental partners, and academic institutions, the project offers a situated example of engaged scholarship aligned with the human rights-based approach (HRBA) and decolonial critiques of development and research. It examines not only how participatory tools were implemented, but how institutional partnerships and ethical commitments were negotiated and maintained across years of collaboration.

The Vaupés project centered on a diploma program, or diplomado titled “Liderazgo, Comunicación y Cambio Climático,” and was co-developed and implemented between 2021 and 2023. The project engaged over one hundred participants across three in-person sessions held in Querarí, and Yapú, bringing together Indigenous leaders, elders, women, youth, academic researchers, and environmental practitioners. This chapter analyzes the methodological design behind the project, including the use of culturally grounded participatory methods such as participatory mapping, Photostories, and serious gameplay, all of which supported processes of community reflection, environmental planning, and intercultural dialogue.

The analysis draws directly from project documentation, workshop transcripts, collaborative outputs, and field notes, as well as the 2021 report *Ríos que convergen*:

Diplomado Liderazgo, Comunicación y Cambio Climático, edited by Ricardo Gómez and Mauricio Beltrán ([Gómez & Beltrán, 2021](#)). This report includes interview transcripts, examples of participatory mapping, Photostories, and serious games, along with reflections by research team members and supplementary sections focused specifically on the participation of elders and women. It serves as a central source in this dissertation, offering detailed insights into how participatory methodologies were implemented and how they enabled dialogue, environmental planning, and intercultural learning.

It is important to reiterate that while earlier participatory initiatives in Chiapas, Mexico and Sucusari, Peru contributed to the development of methods and insights used in Colombia, they are not treated as data sources in this dissertation. Rather, they serve as contextual references, illustrating the iterative and cumulative nature of participatory design in long-term partnerships. The analysis centers solely on the Vaupés case, which is presented as an example of how information science can support community-led development through accountable, rights-based, and participatory practices.

In what follows, I describe the methodological orientation that shaped this project, the research setting, and the specific participatory tools used. Attention is given to how data were generated through collaborative activities, how ethical concerns were addressed, and how knowledge was co-produced across institutional and cultural boundaries. Rather than treating methodology as a static or procedural component of research, this chapter presents it as a dynamic, dialogic, and iterative practice grounded in mutual respect, long-term engagement, and shared purpose. The discussion builds toward an analysis of the project as a tangible example of engaged scholarship, in which information science serves

not only as a technical field but as a platform for social transformation and epistemic justice.

3.2 Methodological Orientation: Participatory Action Research and the Human Rights-Based Approach

The design and implementation of the Liderazgo, Comunicación y Cambio Climático project were guided by a methodological orientation grounded in Participatory Action Research (PAR) and I use the human rights-based approach (HRBA) to evaluate the project holistically. These frameworks informed the project's ethical commitments, decision-making structures, and modes of engagement with Indigenous communities in Vaupés, Colombia. Rather than treating these frameworks as theoretical ideals, the project operationalized them through a series of collaborative, context-sensitive, and culturally grounded practices.

PAR, as articulated by Fals Borda and McIntyre, is rooted in a dialogic model of research that emphasizes reflexivity, co-learning, and collective transformation ([Fals-Borda, 1987](#); [McIntyre, 2007](#)). In the context of this project, PAR was not only a methodology but an ethical stance. It required the research team and institutional partners to relinquish control over many aspects of the process and to engage in shared decision-making with community members from the outset. From the early stages of planning to the co-facilitation of workshops, Indigenous leaders, elders, women, and youth played an active role in shaping both the content and the implementation of the project. These choices reflect the "dialogue of knowledges," an ongoing negotiation between academic and ancestral forms of

knowledge that prioritizes mutual recognition and collective purpose ([Gavazzo et al., 2018](#)).

The integration of the human rights-based approach, particularly as articulated by Charters and Stavenhagen, reinforced this participatory ethic by anchoring the project in the principles of self-determination, accountability, and cultural integrity. HRBA views Indigenous peoples as subjects of collective rights rather than beneficiaries of aid or targets of intervention. It emphasizes that development must be endogenous, equitable, self-managed, and culturally appropriate. These principles were not only referenced rhetorically but built into the structure of the project itself. For instance, the design of each session was collaboratively planned with ASATIQ and ASATRIZY leadership, ensuring alignment with territorial governance practices and community priorities. The project also created spaces for gender- and generation-specific dialogues, supporting equitable participation and recognition of intra-community diversity.

In practice, this meant that decisions about participation, data collection, and dissemination were made in consultation with community members and guided by shared ethical commitments. Consent was understood not as a one-time formality but as an ongoing relational process, revisited across sessions and reinforced through reciprocal communication. The selection of participatory tools such as participatory mapping, Mayuk, Photostories, and Cachiveras was not imposed by the research team but chosen for their capacity to foster community reflection, intergenerational dialogue, and collective planning. These tools embodied the principles of both PAR and HRBA by facilitating processes in which participants could identify priorities, articulate cultural values, and imagine future scenarios on their own terms.

The dissemination of knowledge also reflected this orientation. Rather than publishing findings without consultation or translating community input into academic language alone, the project prioritized returning materials to communities in accessible formats. This included printed photobooks, shared visual documentation, and oral presentations in community settings. Knowledge was treated not as an extractable product but as a shared resource with responsibilities attached. These efforts were designed to ensure that the outcomes of the project would remain useful, visible, and actionable to those who shaped it. Taken together, PAR and HRBA provided more than ethical scaffolding; they functioned as practical guides for conducting research in a way that supported Indigenous governance, affirmed collective rights, and built relationships of trust and accountability. This methodological orientation shaped not only what was done, but how it was done, and with whom. In doing so, it challenged dominant paradigms of research and development that often marginalize local knowledge and reinforce extractive or technocratic models.

3.3 Research Site: Vaupés, Colombia

The Liderazgo, Comunicación y Cambio Climático project took place in the Vaupés department of southeastern Colombia, a region characterized by its vast tropical rainforest, rich linguistic diversity, and predominantly Indigenous population. Vaupés is part of the Colombian Amazon and borders Brazil to the east. It is one of the most remote and biodiverse regions in the country, home to more than twenty Indigenous groups who collectively steward extensive territories under their own governance systems. The majority of the population lives in small communities along tributaries of the Vaupés river such as the Papuri, often accessible only by boat or small aircraft.



Figure 3.1 View of Vaupes River



Figure 3.2 View of Community Runway in Yapu

Two key Indigenous governing organizations played a central role in the project: ASATIQ (Association of Traditional Indigenous Authorities of Querarí) and ASATRIZY (Association of Traditional Indigenous Authorities of Yapu). These organizations represent a network of traditional authorities, including elders, Payés (knowledge keepers), and community leaders from the Cubeo, Bará, Tatuyo, Tuyuka, Carapana, and Tukano peoples, among others. They are responsible for coordinating inter-community dialogue, territorial governance, and processes of cultural preservation. Their involvement in the project was

not peripheral but foundational; they co-directed the planning, facilitation, and evaluation of activities ([ASATIQ, Colombia, n.d.](#); [ASATRIZY, Colombia, n.d.](#)).

The institutional network supporting the project was composed of Fundación Colombia Multicolor, Wildlife Works, the Universidad Nacional Abierta y a Distancia (UNAD), and the University of Washington Information School. Fundación Colombia Multicolor, led by Mauricio Beltrán, has long-standing experience working with community media and participatory communication strategies in Colombia. Wildlife Works brought technical and financial resources through its engagement with the REDD+ mechanism, which seeks to reduce emissions from deforestation and forest degradation by aligning conservation with sustainable development. UNAD served as the Colombian academic partner, providing local institutional presence and expertise in remote and digital education. The iSchool research team contributed methodological design, workshop facilitation, documentation and support for participatory analysis.

These field sites were chosen in consultation with ASATIQ and ASATRIZY to ensure accessibility and community participation. Each session focused on participatory methods tailored to the local context: participatory mapping to visualize territorial identities and threats; Mayuk to surface cultural knowledge and intergenerational priorities; Photostories to document lived experiences and facilitate reflection; and Cachiveras, a communication strategy game developed to support collective decision-making. These sessions also included targeted gatherings with women and elders to ensure inclusive participation and respect for diverse forms of knowledge ([Gómez & Beltrán, 2021](#)).



Figure 3.3 Maloca of Yapu: The traditional, cultural and spiritual center of the community. A newer construction, built to accommodate larger gatherings and served as the location for our diplomado sessions.



Figure 3.4 Vestiges of Western Religion: The juxtaposition of the building's condition is a visual symbol of the community's priorities and commitment to cultural heritage preservation and revitalization.



Figure 3.5
Yapu's
Educational
Institute: View
of the entrance
to the
community
school focused
on primary
education.



Figure 3.6 Repurposed Satellite Dish: At the entrance of the school, the dish has been repurposed to display a greeting – “Welcome to the Educational Institute of Yapu” above a painting depicting the maloca, the anaconda, and jungle.

The selection of methods was shaped not only by local priorities but also by lessons learned from earlier participatory work in Mexico and Peru. In Chiapas, work with Tseltal communities helped refine techniques for visual documentation and intergenerational dialogue. In Sucusari, Peru, collaborative work with the Maijuna community informed strategies for integrating environmental planning with cultural revitalization. [\(Gomez et al., 2018\)](#) These experiences were not treated as transferable models but as learning moments that informed the design of a project rooted specifically in the political, ecological, and cultural realities of Vaupés.

The Vaupés project was structured as a dialogic process in which the research team, Indigenous leaders, and institutional partners engaged in ongoing negotiation and shared planning. The sessions were not isolated events but moments in a longer arc of engagement, grounded in trust, collective responsibility, and mutual learning. By centering the leadership of ASATIQ and ASATRIZY, the project reaffirmed Indigenous governance and created space for community-led development that was both culturally grounded and future-oriented.

3.4 Data Collection in the Vaupés Project

3.4.1 Overview of Data Collection and Methodological Alignment

The data collection process in the Liderazgo, Comunicación y Cambio Climático project was designed to reflect the participatory and rights-based principles outlined in Section 3.2. Rather than using extractive tools or standardized protocols, the project employed culturally grounded participatory methods. These tools were designed to generate rich,

contextual, and actionable forms of knowledge that could support community decision-making, cultural continuity, and long-term planning ([Gomez et al., 2024](#)).

Before presenting each method in detail, this section begins with an overview of the research questions (Table 3.1) at hand and the relationship between the project's methods, its guiding research questions and the theoretical frameworks of PAR and HRBA (Table 3.2). This format offers transparency about how data were produced and why each method was selected

Table 3.1 Research Question Labels

Label	Research Question
RQ1	How do collaborative information-science projects between Indigenous authorities (ASATIQ and ASATRIZY), NGOs, and academic institutions in Vaupés, Colombia, facilitate knowledge co-creation, advance decolonial practice, and support community-defined development goals?
RQ1.1	What strategies are used to engage Indigenous communities in the co-design, management, and dissemination of information systems, and how do these strategies align with local governance structures and knowledge systems?
RQ1.2	How can a dual participatory and rights-based framework be used to evaluate both the collaborative dynamics and the outcomes of these projects, including power relations, community benefits, and long-term sustainability?

Table 3.2 Methods Alignment with Research Design and Frameworks

Method	Related RQ	PAR Principle	HRBA Principle
Photohistories	RQ1, RQ1.1, RQ1.2	Visual storytelling	Self-representation, cultural identity
Participatory Mapping	RQ1, RQ1.1, RQ1.2	Spatial knowledge (dialogues around community, territory, climate)	Memory work, environmental analysis
Serious Gameplay: Cachiveras	RQ1, RQ1.1, RQ1.2	Communication strategy	co-design, collective action
Serious Gameplay: Mayuk	RQ1, RQ1.1	Cultural reflection	Shared decision-making, intergenerational dialogue
Dialogues & Planning	RQ1, RQ1.2	Consensus-building	leadership development, iterative learning

This table is not exhaustive but highlights the deliberate alignment between methodological choices and the ethical, political, and epistemic commitments of the project. Each method will be described in more detail in the sections that follow, with attention to who participated, how facilitation supported local leadership, and what forms of knowledge were generated.

3.4.2 Participatory Games and Serious Play: Mayuk and Cachiveras

Two core participatory tools used in the Vaupés project were the Mayuk game and the Cachiveras board game. Both were designed to promote group reflection, dialogue, and strategic planning, using formats that were accessible, culturally grounded, and adaptable across sessions. These tools were co-facilitated with Indigenous leaders, educators, and members of the research team, and they served as anchors for participatory analysis across the three project phases.

Mayuk

Mayuk was developed by Mauricio Beltrán and has been used in a range of community planning processes in Colombia. In the Vaupés context, it was adapted to help participants identify elements of their cultural universe, including rituals, stories, objects, and practices that strengthen or weaken their communities' well-being. Each game board included symbolic categories such as myth, ritual, habit, and knowledge. Participants worked in small groups to populate these categories with items that reflected their lived experience and ancestral values.

The Mayuk sessions emphasized intergenerational exchange, with elders, youth, and women contributing perspectives. Participants used the game to reflect on the threats posed by extractive

development, external education systems, and religious conversion. At the same time, they highlighted cultural strengths, including ceremonies, oral histories, traditional medicine, and communal governance practices. Discussions generated through the game were documented through group notes, photo and video records, and facilitators' reflections ([Gómez & Beltrán, 2021](#)).

In line with PAR, Mayuk fostered co-constructed knowledge by encouraging horizontal participation and critical reflection. It created space for participants to articulate shared values and cultural priorities while also naming sources of tension. From an HRBA perspective, the game supported the principles of cultural integrity, participation, and community-led diagnosis of local realities.

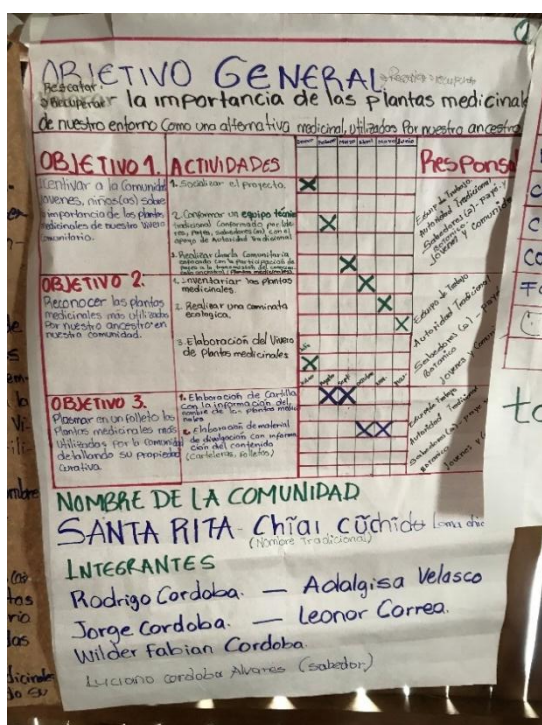


Figure 3.7 Santa Rita Community Objectives: As part of dialogic process, community groups outline the primary goals and objectives set forth as priorities.

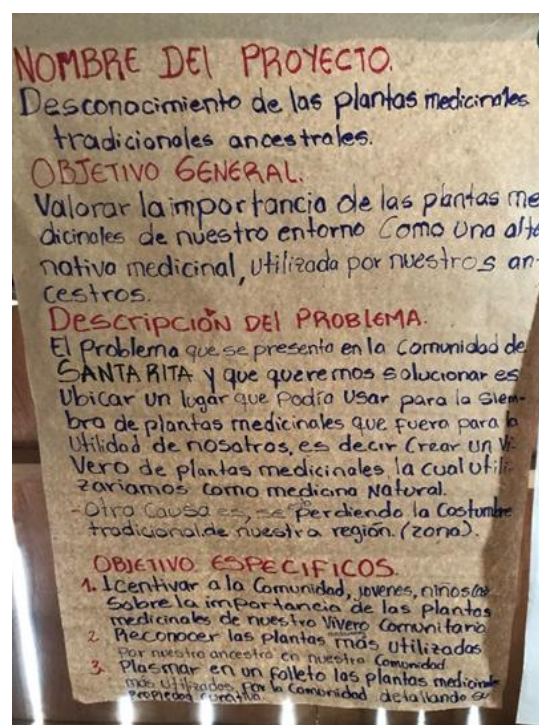


Figure 3.8 Santa Rita Project Objectives: Community groups then iterate on their initial outlines, in this example focuses on developing initiatives to increase medicinal plant knowledge, and creating a designated space for cultivation and education within the community.



Figure 3.9 Community Chagra Illustration: The *chagra* is a familial or community plot, where essential crops are grown. This hand-drawn illustration depicts a typical *chagra*, and reflects the priority the community places on traditional subsistence.

Figure 3.10 Santa Rita Group Presentation: Designated community members participated in the diplomado program, here members representing the community of Santa Rita, introduce themselves and present their community objectives.



Cachiveras

Cachiveras, also adapted by Beltrán, is a strategy-building board game intended to help communities develop communication campaigns and social action plans. The game was introduced during the final session in Yapú, where participants collaborated to design messaging strategies in support of local governance, environmental protection, and cultural resilience.

Using metaphorical landscapes and icons familiar to the region, the game required players to move through different zones representing knowledge, tools, audiences, and challenges. Participants constructed messages, identified key actors, and outlined action steps through gameplay. The process was iterative and dialogic, with each round opening new questions about how best to communicate across generations and institutions.

Cachiveras enacted PAR principles by inviting collective planning and reflection through creative play. It was grounded in local knowledge systems while also enabling strategic thinking about advocacy and media use. From an HRBA standpoint, the game emphasized participation, accountability, and the co-creation of culturally meaningful communication strategies.

In both games, facilitation played a critical role. Sessions were designed to be flexible, multilingual, and inclusive. Materials were translated into local languages when needed, and facilitators worked closely with ASATIQ and ASATRIZY leaders to ensure that sessions aligned with community protocols. Importantly, the games did not function as isolated exercises but as building blocks in a longer participatory process, linking knowledge generation to action planning and community-led development.

3.4.3 Photostories and Participatory Mapping

Photostories and participatory mapping served as two of the most generative methods for engaging intergenerational dialogue, facilitating reflection on cultural practices, and co-producing knowledge during the Vaupés project. Each method was implemented not as a neutral research instrument but as a practice grounded in cultural relevance, collective memory, and the ethical commitments of PAR and HRBA frameworks. This section

describes the structure, purpose, and facilitation of these methods, with particular attention to how they aligned with the research questions and participatory values.

Photostories

Photostories is a participatory method that integrates photography and dialogue to foster reflection and co-creation of knowledge. Developed by Ricardo Gómez, the method is rooted in community-based participatory research (CBPR) and draws on traditions of visual research and participatory photography ([Gomez, 2024; Yefimova et al., 2014](#)). In the Vaupés project, Photostories were used to explore participants' everyday experiences, document cultural and environmental practices, and support the articulation of community priorities.

Participants were invited to take photographs that represented aspects of community life, including challenges, strengths, and hopes for the future. These images then served as prompts in small group discussions, allowing participants to narrate the significance of what they had captured. This dual process of image-making and storytelling not only produced valuable insights but also created space for emotional and cultural expression.

The facilitation team provided minimal instruction on photography technique, focusing instead on how to use the camera to communicate stories and values. Sessions were held in community, with participation from elders, youth, and women's groups. As Gómez emphasizes, Photostories is designed to decentralize power in the research process and elevate the perspectives of those most often excluded from formal information systems. The photographs and discussions were documented with consent and later compiled into printed books that were returned to each community, ensuring that the outcomes of the process remained in the hands of those who generated them. This process was adapted

from earlier collaborations with Tseltal Maya communities in Chiapas, and the practice was adapted to the Vaupes context ([Gomez et al., 2018](#); [Gomez, R., Zubair, C., Berwick, J., & Morales, M., 2017](#)).

Photostories directly addressed the research questions by providing insight into how participants interpret their lived realities and articulate aspirations for territorial development and cultural preservation. The method also enacted key principles of HRBA by centering the voices of Indigenous participants, ensuring accountability through return of materials, and enabling culturally grounded forms of knowledge production.

Figure 3.11 Photostories: Centering Women's Voices and Experiences. This image depicts the women's group, chosen to illustrate the importance that river has to their communities, not just in being a source of water, and sustenance, but as a sacred, central component to their origin story.



Figure 3.12 Photostories Behind the Scenes: Collaboration and dialogue was at the core of this experience. The women's group discussed the themes that they wanted to highlight and had support in capturing images that included them all.



Figure 3.13 Paye Gregorio on the Importance of the River Papuri: Paye Gregorio, an elder of the community of Yapu share the story of the river, the anaconda, and how it is central to community identity.

Participatory mapping

Participatory mapping workshops were designed to support community reflection on territorial identity, spatial knowledge, and visions for the future. These maps were created collectively using markers, paper, and other analog materials. Participants began by identifying key cultural, environmental, and spiritual landmarks, then layered onto these maps the challenges facing their territories and their visions for future governance, sustainability, and cultural continuity.

The process unfolded as both a practical and symbolic act. Practically, it allowed communities to express spatial relationships and priorities in ways that formal cartography often overlooks. Symbolically, the act of mapping became a form of narrative construction and a way to affirm ancestral presence, document territorial knowledge, and envision change. Each map represented a negotiation among participants, making visible the multiple perspectives that coexist within a single community.

Facilitation emphasized local leadership and was often guided by elders or community leaders, ensuring the maps reflected culturally appropriate representations of space. In

some sessions, maps were split between representations of the past, present, and desired future. This format encouraged temporal reflection and situated the mapping process within broader narratives of resilience and transformation. These experiences were informed by examples from the work of Gilmore and Young with Maijuna communities in Peru ([Gilmore & Young, 2012](#)).

Participatory mapping contributed to the research questions by offering insight into how communities define territory, diagnose challenges, and propose alternatives. It also supported PAR and HRBA commitments by fostering collective analysis, prioritizing community voices, and linking the documentation of place to processes of self-determination.

Both Photostories and participatory mapping exemplify how participatory methods can serve as sites of both inquiry and intervention. They generate knowledge that is deeply contextual, emotionally resonant, and politically relevant. In the Vaupés project, these tools helped shift the locus of knowledge production toward the community, operationalizing PAR and HRBA not as abstract commitments but as concrete practices rooted in trust, collaboration, and mutual respect.



Figure 3.14 Participatory Mapping: Through collaboration and dialogue communities visualize and define community realities and propose changes.

Figure 3.15 Participatory Mapping Process: The group representing the community of San Antonio-Papuri lay out the community's relation to the river in a hand drawn map.

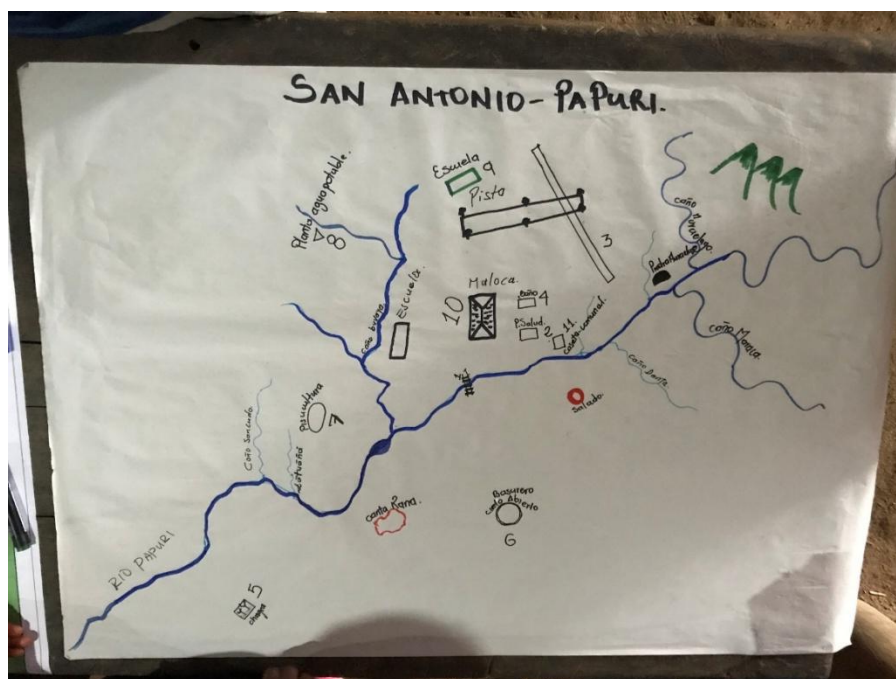
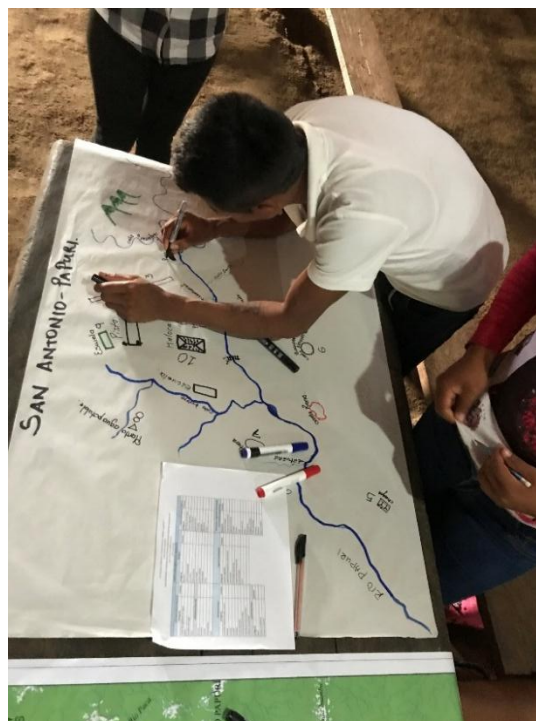


Figure 3.16 Community San Antonio-Papuri Map: In this example, the completed map depicts key components of the community, such as the Maloca, the school, and the runway. This deep knowledge of territory will allow communities to address concerns and plan for future development projects.

3.4.4 Dialogues, Planning Sessions, and Documentation

In addition to participatory games and visual tools, the Vaupés project relied on facilitated dialogues, collaborative planning sessions, and ongoing communication to support long-term engagement and iterative knowledge generation. These forms of interaction were essential to the ethical and practical commitments of the project, providing space for Indigenous leaders, elders, youth, and institutional collaborators to reflect, adapt, and co-construct each phase of the work. Rather than treating conversation as ancillary to research, these moments were valued as core sites of epistemic production and collective learning.

Throughout each session, whether virtually via Zoom, in Mitú, or in the field, group dialogues were organized around key themes identified by ASATIQ and ASATRIZY leadership. These included cultural revitalization, environmental governance, gender equity, and intergenerational knowledge transfer. The dialogues emphasized horizontal participation and were often led by traditional authorities or experienced community educators. Participants reflected on prior activities, interpreted the meanings of visual or game-based outputs, and proposed next steps grounded in their collective priorities ([Gómez & Beltrán, 2021](#)).

Planning sessions built on these reflections to coordinate concrete actions. These included decisions about territorial education programs, REDD+ project proposals, and communication strategies to support community visibility and advocacy. ASATIQ and ASATRIZY guided the structure and goals of each session, ensuring alignment with their governance practices and strategic priorities. The sessions were documented through detailed field notes, facilitator reflections, and visual records. In some cases, community

members contributed their own documentation in the form of notes or summaries, often in their own words or languages.

Between formal workshops, communication continued through WhatsApp groups maintained by the research team and institutional partners. These channels supported real-time updates, the sharing of photographs, and collective decision-making. They also functioned as informal spaces where community members could raise questions, suggest adjustments, and maintain relationships beyond scheduled meetings. This continuity supported an iterative design process and reinforced accountability over time.

These dialogic and planning practices contributed to RQ1 and sub-questions RQ1.1 and RQ1.2 by offering insight into the governance dynamics of collaboration and the evolving priorities of participants. Methodologically, they ensured that the project remained flexible, responsive, and grounded in local realities. From a rights-based perspective, they enacted principles of participation, self-determination, and transparency by placing decision-making in the hands of community leaders and maintaining open channels of feedback and mutual adjustment.

Together, these practices illustrate how everyday communication, and collaborative planning can function as meaningful forms of data and co-authorship. They also demonstrate the importance of long-term accompaniment in participatory research, where trust is sustained not by isolated interventions, but by the relational labor of ongoing dialogue and shared responsibility.



Figure 3.17 Concluding Diplomado through Dialogue: In a final activity, diplomado participants and diplomado facilitators engaged in reflection and dialogue by building a story spiral of interconnection. Within each slip of paper, participants wrote down their aspirations and goals for the work ahead.

Figure 3.18 Story spiral as symbol of community, collaboration, and interconnection: During this time of reflection, community members had an opportunity to reflect on the work of the diplomado, and the work still ahead to address community needs. The spiral served as a symbol of commitment to community partnerships.



3.5 Data Analysis and Community-Centered Interpretation

The analysis of data in this study was not confined to isolated acts of coding or post-hoc thematic review. Instead, it was woven into the fabric of the project itself, through iterative reflection, collective interpretation, and the embedded dialogue that characterized each stage of collaboration. Drawing from participatory action research (PAR) and the human rights-based approach (HRBA), this process viewed analysis not only as an interpretive task but as a relational and political one. The material generated through Photostories, cartographies, collaborative games, and planning sessions was co-analyzed with participants during and after each activity, with emphasis on reflection, validation, and adaptation. At the same time, this dissertation applies the HRBA principles as an overarching analytical framework to assess the project as a whole, not only its outputs but its governance practices, facilitation design, and institutional relationships.

Qualitative interpretation of participatory activities relied on in-session reflection, synthesis posters, oral walkthroughs, and collaborative notetaking. Each method generated distinct visual, narrative, and strategic outputs that were discussed in plenary groups facilitated by community educators or researchers. For instance, in the Photostories sessions, participants selected, captioned, and interpreted their photographs through guided discussion, with facilitators documenting their insights in their own words.

Synthesis of these reflections occurred not only through researcher analysis but through continued engagement with community leaders and session participants, who expanded, corrected, and adjusted earlier interpretations.

Table 3.3 below summarizes how each participatory method generated data, how interpretation was carried out collaboratively, and how these processes contributed to the broader analytical goals of the study.

Table 3.3 Participatory Activities (PAR-Informed Process)

Method	Data Output	Community Interpretation	Researcher Role	Analytic Outcome
Photohistories	Photos, oral reflections, testimonies	Group dialogues, image selection, presentations	Documenting reflections, comparing themes	Themes around community life, gender, ecological knowledge
Participatory Mapping	Symbolic and geographic maps, annotated visuals	Facilitated plenaries, story-based interpretation	Synthesizing outputs, noting recurring symbols	Visual expression of territory, identity, planning priorities
Serious Gameplay: Cachiveras	Communication strategies, planning sheets	Scenario-based group responses	Supporting roleplay and thematic synthesis	Collective identification of communication gaps and solutions
Serious Gameplay: Mayuk	Cultural symbols, values, challenges, narrative choices	Group consensus on what strengthens/weakens culture	Guided game facilitation, thematic grouping	Community-articulated definitions of environmental and cultural concerns
Dialogues & Planning	Field notes, meeting notes, chats, participant summaries	Oral synthesis and feedback across sessions	Iterative coding and cross-session analysis	Evolving priorities, collaborative governance reflections

The goal was not to isolate data points but to create ongoing opportunities for shared interpretation. These iterative cycles informed the co-design of territorial education initiatives and REDD+ communication strategies.

In addition to the interpretation of specific activities, the project itself such as its structure, process, and institutional relationships, was analyzed through a human rights-based lens. Drawing on the ten interdependent principles outlined by Claire Charters and Rodolfo Stavenhagen (2009), the project was evaluated according to its alignment with the rights to participation, self-determination, environmental protection, cultural appropriateness, and

democratic accountability. Table 3.4 offers a rights-based assessment of core project components.

Table 3.4 HRBA Evaluation of Project Components

Project Component	HRBA Principle	Interpretive Focus	Assessment Summary
Workshop Design & Facilitation	Participation; Cultural Appropriateness	Were themes and formats developed collaboratively? Did methods reflect local pedagogies?	Sessions adapted to local rhythms and knowledge traditions
Partner Roles & Governance	Self-Determination; Democratic Accountability	Were ASATIQ and ASATRIZY central to planning and decision-making?	Community associations led all major planning and review sessions
Communication Infrastructure	Access to Information; Sustainability	Did tools and shared documents support ongoing participation?	Facilitated continuous engagement and feedback across sessions
Gender-Focused Spaces	Equity and Non-Discrimination	Were women's perspectives actively included in project planning and documentation?	Dedicated sessions supported inclusion; follow-up needed for continuity
Outputs and Proposals	Collective Rights; Environmental Protection	Were outputs grounded in territorial priorities and cultural values?	Community-developed proposals reflected lived experience and ecological knowledge

This evaluative framework reinforces the methodological insight that analysis is not only about data but about structure. In this context, interpreting the project itself as a rights-based intervention allows for critical reflection on power dynamics, accountability, and institutional alignment with Indigenous governance.

Taken together, the dual interpretive strategies used in this research, reflect a commitment to ethical, collaborative, and decolonial research. They offer a model for evaluating not only what is produced in participatory information science but how those processes unfold, whose knowledge is centered, and whose rights are realized.

3.6 Ethical Commitments and Researcher Positionality

The ethical foundations of this research are grounded in the principles of accountability, respect, and reciprocity. These commitments shaped every phase of the Liderazgo, Comunicación y Cambio Climático project, from early planning and consent processes to documentation and dissemination. Working in collaboration with ASATIQ, ASATRIZY, Fundación Colombia Multicolor, Wildlife Works, UNAD, and the University of Washington, the research was designed not as an extractive study but as a participatory process embedded in long-standing relationships.

Informed consent was understood as both a relational and iterative process. While formal institutional approval was secured through the University of Washington Human Subjects Division, consent at the community level took precedence. Initial meetings were held with ASATIQ and ASATRIZY leadership to present the goals of the project, discuss expectations, and determine whether and how the proposed activities aligned with community priorities. These dialogues led to a process of collective agreement rather than individual consent alone. During each in-person session, facilitators reviewed consent verbally and in writing, emphasizing that participation was voluntary and that individuals could choose whether and how to contribute to each activity. When visual or narrative outputs were collected, additional confirmation was sought before documentation was used in reports, presentations, or printed materials.

As a non-Indigenous researcher trained in information science, I recognize my position as both an academic collaborator and an institutional representative. I identify as a first-generation Mexican American woman with experience working in Latin America and with Indigenous communities in Mexico, Peru, and Colombia. I do not speak Indigenous languages and have no familial or ancestral ties to the communities with whom I worked.

My entry into this work came through partnerships with trusted collaborators such as Mauricio Beltrán and Ricardo Gómez, and my ongoing participation was contingent on the trust extended by ASATIQ and ASATRIZY.

Throughout the project, I aimed to be transparent about the purpose and scope of my involvement. I supported methodological design, documentation, and facilitation while deferring to the authority of community leaders on matters of protocol, content, and decision-making. The structure of the project intentionally distributed leadership across academic and non-academic actors to reduce the possibility of institutional dominance. My approach aligns with what Speed (2006) describes as critically engaged activist research, which requires scholars to remain accountable to the political and epistemic goals of the communities with whom they work.

Avoiding extractive research practices required deliberate mechanisms. These included co-authorship of reports, return of materials in accessible formats, collaborative data interpretation, and the integration of community feedback into final outputs. In addition to returning books and documentation to participating communities, the project report was edited collectively and included contributions from all institutional partners, community reflections, and translated workshop examples ([Gómez & Beltrán, 2021](#)). The intention was not simply to "give back" but to ensure that outputs reflected shared ownership and utility. My long-term commitment to this work extends beyond the scope of this dissertation. The relationships built in Vaupés have informed other research, teaching, and advocacy efforts and continue to shape how I understand the responsibilities of academic work. Rather than framing ethical engagement as a checklist or a precondition for access, this project

understands ethics as an ongoing negotiation, grounded in humility, listening, and responsiveness to community-defined goals and protocols.

3.7 Project Timeline and Phases of Engagement

The Liderazgo, Comunicación y Cambio Climático project unfolded in three interconnected phases between 2020 and 2023. Guided by the ethical and participatory commitments described in previous sections, the project did not follow a rigid implementation plan. Instead, it developed iteratively through cycles of relationship-building, co-design, facilitation, reflection, and revision, always grounded in dialogue with ASATIQ and ASATRIZY.

Phase 1: Relationship Building and Participatory Design (2020–2021)

This first phase laid the foundation for long-term collaboration among the institutional partners and Indigenous organizations. Initial work began in 2020 through the efforts of principal investigators Ricardo Gómez and Mauricio Beltrán, who initiated funding proposals, early conversations with ASATIQ and ASATRIZY, and established partnerships with researchers from UNAD and Wildlife Works. During this time, the research team began adapting participatory tools, such as serious gameplay, Photostories, and participatory mapping, to better fit the territorial and cultural contexts of the region. Formal planning sessions with the full institutional team began virtually in October 2021. These Zoom-based meetings brought together representatives from Fundación Colombia Multicolor, Wildlife Works Colombia, UNAD, and the University of Washington to coordinate logistics, review facilitation materials, and align around shared principles and

expectations. These early sessions provided space for trust-building and cross-institutional coordination prior to engaging directly with communities.

Mitú served as a key logistical and relational waypoint during this phase. Although not a formal workshop location, it was where the full research team first met in person after months of virtual collaboration. This gathering allowed for final preparation, clarification of roles, and detailed planning before travel to the first community site. It also marked the beginning of field-based implementation.

Phase 2: Implementation of Community-Based Workshops (Oct 2021–Apr 2022)

The second phase consisted of three in-person participatory workshops held between October 2021 and April 2022. Each session was hosted in a different Indigenous community selected by ASATIQ and ASATRIZY to ensure territorial representation and to support equitable participation across regions. These workshops included the facilitation of participatory methodologies, thematic dialogues, and collaborative planning sessions. Each site was visited by the full research team, and each session was designed in close coordination with local leaders.

- Session 1 (October 2021): Yapu and Tapurucuara – Focused on initiating the diplomado project, and facilitating weeklong workshops in collaboration with institutional partners.
- Session 2 (January 2022): Yapu and Santa Lucia – Continued collaboration with community partners.
- Session 3 (April 2022): Yapu and Tapurucuara – Focused on wrapping up the final week of in-person workshops, concluding field work, sharing initial reports,

celebrating the end of the diplomado program and awarding certificates from UNAD to the participants.

At each site, participant feedback and emergent priorities shaped the structure of subsequent sessions. Facilitators adapted methods in response to youth input, reflections from elders, and recommendations from ASATIQ and ASATRIZY, reinforcing the iterative and participatory design of the project.



Figure 3.19 Diplomado Conclusion and Celebration: On the final day of the diplomado, we all celebrated the culmination of the work we completed together; Community leaders perform a traditional dance to open the celebration ceremony where participants of the diplomado received their diplomas issued by UNAD.



Figure 3.20 Diplomado Woman's Group: This image highlights the representation and contribution of women representatives across all participating communities.

**Figure 3.21: Behind the Scenes:
Woman's Group Community Support**

This image juxtaposed to Figure 3.21 shows that behind the lens, women were supported and celebrated in their participation and completion of the diplomado. Participation requires time and travel, and often time away from family obligations. Communities made it a priority to facilitate the inclusion of women in this development work



Phase 3: Reflection, Dissemination, and Follow-Up (2022–2023)

The final phase centered on synthesis, verification, and dissemination. Outputs generated during the workshops were reviewed and shared with communities in both printed and digital formats. The *Ríos que Convergen* report was co-developed during this period as a synthesis of the program's findings, grounded in community priorities and visual materials.

WhatsApp continued to serve as a critical communication tool, supporting feedback on draft materials and coordination for follow-up visits. Institutional partners and community leaders used these channels to reflect on the outcomes of the workshops, identify areas for ongoing capacity-building, and propose directions for future collaboration.

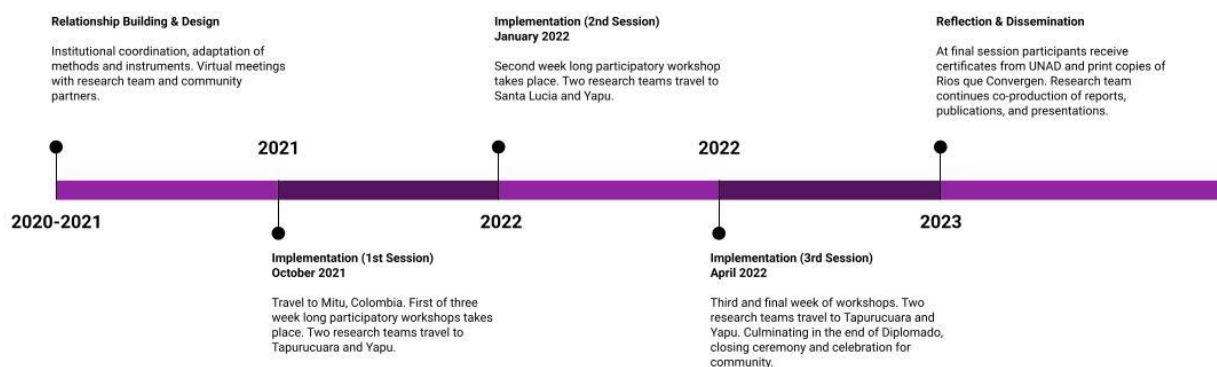


Figure 3.22 Phases of Engagement: A visual timeline of each component of the diplomado

This phased structure allowed the project to remain flexible and accountable, supporting mutual learning across institutions and Indigenous organizations. Each stage built upon the one before it, reinforcing a long-term orientation centered on respect, co-authorship, and sustained territorial engagement.



Figure 3.23 Diplomado Group Picture: Community members and participants of the diplomado program present at the celebration in Tapurucuara. Participants hold their diplomas issued by UNAD. Not only is it a symbol of completing the diplomado components, but it also lends institutional backing and credibility to the capacity building sessions.

3.8 Conclusion

The methodological design of the Liderazgo, Comunicación y Cambio Climático project reflects a grounded, ethical, and collaborative approach to research in information science. Rooted in the principles of Participatory Action Research (PAR) and the Human Rights-Based Approach (HRBA), the project was developed through sustained engagement with Indigenous leaders, non-governmental organizations, and academic institutions. Rather than applying a pre-fixed model, the research unfolded through iterative cycles of co-design, facilitation, reflection, and revision, remaining responsive to shifting contexts and grounded in the governance practices of ASATIQ and ASATRIZY.

The participatory tools and processes discussed in this chapter functioned as more than technical methods. They served as mechanisms for collective analysis, cultural affirmation,

and co-authorship. Each approach was adapted through dialogue, tested in practice, and revised based on participant feedback. These methods were supported by long-term accompaniment and continuous communication, including virtual planning sessions, WhatsApp coordination, and return visits for validation and dissemination. Ethical commitments were embedded not only in the design of activities but in the structure of relationships: in the distribution of decision-making, the recognition of linguistic and cultural frameworks, and the shared responsibility for documentation and follow-up. As outlined in Section 3.5, data analysis occurred on two levels. First, interpretation of participatory outputs took place in real time with community members through facilitated synthesis and iterative review. Second, the research employed a rights-based evaluative lens to examine the project as a whole, including its facilitation, institutional dynamics, and long-term commitments, according to the interdependent principles articulated by Charters and Stavenhagen. The combination of participatory and rights-based interpretation enabled a holistic understanding of both process and outcome, emphasizing epistemic justice, governance, and collective decision-making.

The timelines and logistical structure presented in Section 3.7 further illustrate how the project evolved across phases of relationship-building, implementation, and reflection. Fieldwork sessions were conducted between October 2021 and April 2022, with preparatory work beginning earlier and dissemination continuing into 2023. These phases were not treated as discrete units, but as part of a longer arc of collaboration, grounded in mutual learning and relational accountability.

This case does not propose a universal blueprint. Rather, it stands as a situated example of participatory information science that takes seriously the political, cultural, and

epistemological dimensions of research in Indigenous territories. The methodologies described here emerged from specific histories, negotiations, and territorial conditions in Vaupés. They offer insight into what it means to practice collaborative research that aligns with the visions and rights of Indigenous partners, and that responds to the demands of ethical knowledge production in postcolonial contexts.

Chapter 4 turns to empirical analysis. It begins by tracing the formation of the project and the collaborative dynamics that shaped its development. The focus will remain on how relationships, reflexivity, and co-construction define the practice of information science in this context.

Chapter 4. Applying a Human Rights-Based Framework to Participatory Information Science Research

Interpreting Practice and Partnership in the Vaupés Project

4.1 Introduction: Framing the Human Rights-Based Participatory Lens

This chapter presents an in-depth analysis of the Liderazgo, Comunicación y Cambio Climático project in Vaupés, Colombia, through a dual interpretive framework designed to evaluate participatory research in practice. Building on the theoretical foundation established in Chapter 2 and the methodological design detailed in Chapter 3, this chapter applies two complementary lenses: (1) participatory interpretation grounded in the principles of Participatory Action Research (PAR), and (2) a rights-based evaluative framework derived from the Human Rights-Based Approach (HRBA) articulated by Charters and Stavenhagen.

Rather than treating participatory methods as data collection tools alone, this analysis examines how they functioned as mechanisms for governance, cultural affirmation, and self-determination. The goal is not only to understand what the project produced, but how its design, facilitation, and relationships aligned with international principles of Indigenous rights, particularly those expressed in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).

To establish this framework, the following subsections reintroduce and operationalize key concepts. Section 4.1.1 outlines the chapter's purpose and analytic structure. Section 4.1.2 revisits PAR as a basis for collaborative interpretation. Section 4.1.3 defines the HRBA and explains its adaptation from a legal framework to a methodological tool. Section 4.1.4

grounds this evaluative approach in the specific rights articulated in UNDRIP. Section 4.1.5 synthesizes both lenses into a dual framework used throughout the chapter to interpret participatory activities and assess project governance.

The table below summarizes the ten HRBA principles that guide the rights-based dimension of analysis. These principles will appear throughout the chapter as evaluative criteria to assess how participatory methods and project governance aligned with Indigenous rights and community priorities.

Table 4.1 HRBA Principles for Development Within Indigenous Context
(Adapted from Charters & Stavenhagen, 2009)

Principle	Definition
Endogenous	Development must originate from within the community and respond to its collectively defined priorities.
Participatory	All stages must include Indigenous participation, grounded in free, prior, and informed consent.
Socially Responsible	Projects must address community-identified needs and support empowerment.
Equitable	Benefits must be distributed fairly across the community, reducing internal disparities.
Self-Sustaining	Initiatives should contribute to long-term improvements in quality of life.
Sustainable & Environmentally Protective	Development must preserve ecological balance and promote environmental stewardship.
Culturally Appropriate	Efforts must align with cultural values, languages, and knowledge systems.
Self-Managed	Decision-making and resources should be governed by the community's own institutions.
Democratic	Development must support democratic participation and pluralistic governance.
Accountable	All actors must report transparently to communities and uphold mutual accountability.

4.1.1 Purpose and Analytical Approach

This chapter serves as the analytical core of the dissertation, addressing the first and primary research question: How do participatory information science projects align with Indigenous governance practices and collective rights? While the preceding chapters established the theoretical foundation (Chapter 2) and outlined the participatory design and facilitation strategies of the Vaupés project (Chapter 3), this chapter moves toward a grounded, systematic interpretation of how the project unfolded in practice.

The purpose of this analysis is twofold. First, it examines how specific participatory methods - such as Mayuk, Cachiveras, Photostories, participatory mapping, and facilitated dialogues - supported community-defined goals related to cultural continuity, environmental governance, and self-determination. Second, it evaluates whether the project's structure, relationships, and decision-making processes reflected the rights and principles articulated in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), particularly as interpreted through the Human Rights-Based Approach (HRBA) developed by Charters and Stavenhagen.

This analytical framework is designed to hold both methodological and ethical commitments in view. The goal is not to assess outcomes against external metrics of success, but rather to examine whether the participatory processes enacted in the Vaupés project respected and advanced the governance structures, values, and collective rights of ASATIQ and ASATRIZY. By doing so, this chapter positions the research not only as a case study in participatory information science, but as a site of reflection on how research itself can be aligned with Indigenous-led visions of development and autonomy.

4.1.2 Participatory Interpretation: The PAR Dimension

The first interpretive layer applied in this chapter is grounded in the principles of Participatory Action Research (PAR), a methodology rooted in collective inquiry, co-authorship, and iterative reflection. As discussed in Chapter 2, PAR challenges extractive models of research by emphasizing the active role of participants in shaping the questions, interpreting the findings, and defining the outcomes of the research process. In the Vaupés project, this principle was not abstract. It was embedded in the daily practice of collaboration, from the facilitation of methods to the ways findings were discussed, adapted, and acted upon.

In line with PAR as a relational and dialogic process that centers the experiences and knowledge of participants, this project approached interpretation as a collective endeavor. Each activity included moments of group analysis, where participants revisited their own creations, discussed patterns, clarified meanings, and proposed next steps. These interpretive moments often took place through visual synthesis posters, large-group discussions, or smaller breakout conversations, depending on the session. They were documented through facilitator notes, photographs, summaries, and collective visual records. Importantly, interpretation was not confined to post-activity reflection. It was treated as an ongoing process embedded within the facilitation itself, with researchers and facilitators adjusting language, timing, and sequencing based on real-time feedback.

This participatory interpretive approach made space for community members to guide the meaning-making process, often drawing on their own frameworks and ways of seeing. It also ensured that the outputs of the project were not treated as standalone products, but as

expressions of shared reflection grounded in territorial knowledge and lived experience. These dynamics form the first dimension of the dual-lens framework applied throughout this chapter: a collaborative, iterative form of interpretation that resists unilateral claims of analytical authority and recognizes Indigenous participants as producers of knowledge and co-authors of research.

4.1.3 Human Rights-Based Evaluation: Operationalizing HRBA

The second interpretive lens used in this chapter draws from the Human Rights-Based Approach (HRBA), a framework developed to make international human rights instruments actionable in development and governance settings. The version applied here builds specifically on the work of Charters and Stavenhagen, who developed a set of ten interdependent principles to guide the implementation of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) in state and institutional practice (Charters & Stavenhagen, 2009).

In adapting this framework to evaluate a participatory research project, this dissertation makes a deliberate distinction between rights as general moral or legal claims and human rights as internationally recognized, collective entitlements codified in instruments such as UNDRIP. While the project in Vaupés was guided by ethical commitments to community control, transparency, and equity, it is the HRBA that allows for a structured assessment of whether these commitments correspond to human rights obligations, such as those related to participation, cultural integrity, self-determination, and access to information.

The HRBA principles offer a normative framework for examining not only the methods deployed, but also the governance structures, facilitation processes, and institutional relationships that shaped the project. In this analysis, each principle serves as a point of

reference to assess whether the project is aligned with the collective rights of Indigenous peoples as articulated in UNDRIP. This reframing of HRBA transforms what is often treated as a top-down policy tool into a practical, community-grounded evaluative lens that can be applied to collaborative research.

This approach is not intended to replace community-defined indicators of success. Rather, it complements participatory interpretation by introducing a structured way to examine whether research practices contribute to the realization of rights that Indigenous peoples have fought to have recognized internationally. In doing so, it offers a way to hold research institutions and their partners accountable, and not just to ethical standards, but to legal and political commitments grounded in Indigenous self-determination.

4.1.4 Aligning Research with UNDRIP

The use of a Human Rights-Based Approach (HRBA) in this dissertation is explicitly grounded in the collective rights articulated in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), adopted by the UN General Assembly in 2007. UNDRIP is not merely a symbolic affirmation; it is a legal and political instrument that sets out the minimum standards for the survival, dignity, and well-being of Indigenous peoples globally. It establishes collective human rights in relation to land, knowledge, culture, language, education, development, and governance. These are not abstract ideals, rather they are concrete claims rooted in generations of Indigenous advocacy and resistance. It is important to note that while UNDRIP was agreed upon by nations around the world, it is not a legally binding document, that is to say that it remains unenforceable due to the complexities of contexts for Indigenous communities globally. It is for this reason that

Charters and Stavenhagen offer practitioner-oriented ways of understanding the declaration and making it function within these constraints.

Several articles within UNDRIP are especially relevant. These articles speak directly to the core concerns of participatory information science: communication, media, knowledge systems, language revitalization, representation, education, governance, and consent. They provide a foundation for evaluating whether participatory research practices uphold or undermine the rights of Indigenous peoples in relation to how knowledge is produced, shared, and used.

Table 4.2 summarizes the most relevant articles from UNDRIP, their key content, and how they align with the HRBA principles used in this analysis. This structure allows for a systematic reading of the Vaupés project's participatory methods through the lens of internationally recognized rights.

Table 4.2 UNDRIP Articles and Their Relation to HRBA
(Adapted from Charters & Stavenhagen, 2009 and UNDRIP, 2007)

UNDRIP Article	Key Right	Related HRBA Principles	Relevance to Vaupés
Article 13	Right to use, develop, and transmit languages, oral traditions, and writing systems	Cultural integrity, access to information	Photostories, Mayuk, and mapping supported intergenerational transmission of language and cultural knowledge.
Article 14	Right to establish Indigenous educational systems	Self-determination, participation, sustainability	Project supported planning for territorial education initiatives led by ASATIQ and ASATRIZY.
Article 15	Right to dignity and representation in public information	Non-discrimination, accountability	Participatory outputs documented community narratives in their own terms and visual styles.
Article 16	Right to establish and access Indigenous media	Access to information, cultural integrity	Photostories and other visual methods functioned as community media rooted in Indigenous perspectives.
Article 18	Right to participate in decision-making through representative institutions	Participation, self-determination	Community leaders guided facilitation, methodology design, and project governance.
Article 19	Right to free, prior, and informed consent before measures affecting communities	Free, prior, and informed consent, transparency	Institutional agreements and workshop planning were based on ongoing consultation and approval by community orgs.
Article 31	Right to maintain and control cultural heritage, knowledge, and technologies	Cultural integrity, access to information, accountability	Methodologies were co-designed to protect and reflect traditional knowledge, with shared authorship and review.

By explicitly linking project practices to these articles, this chapter treats UNDRIP not as a distant legal framework, but as a living standard against which participatory research can be evaluated. The HRBA principles used throughout this analysis are not general ethical ideals; they are derived from these articles and shaped by their historical and legal weight.

In this sense, the framework presented here is grounded in both Indigenous international law and the localized realities of community-led knowledge work in Vaupés.

4.1.5 Framing the Dual-Lens Evaluation Model

Each lens addresses a different dimension of the research process, and together they offer a more complete framework for understanding how participatory projects function, not just in terms of methods and outputs, but in terms of governance, responsibility, and the realization of Indigenous rights.

The participatory dimension centers collective meaning-making and local epistemologies. It attends to how participants interpreted their own Photostories, game sessions, and mapping exercises; how feedback was integrated through dialogue; and how facilitation adapted in response to context and relational dynamics. This approach reflects longstanding commitments within PAR to shared authorship, iterative learning, and the validation of lived experience as legitimate knowledge. The PAR lens is essential because it foregrounds the community's voice in interpreting what matters, what changes, and what persists.

Equally important, however, is the rights-based dimension. The HRBA, as adapted from Charters and Stavenhagen (2009), provides a framework for evaluating whether a participatory project not only listens to communities, but structurally upholds their rights as defined in international law and rights articulated in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). By aligning each phase of the project with HRBA principles such as self-determination, transparency, and accountability, this framework helps expose areas where institutional practices may fall short of ethical commitments, even when methods are participatory in form.

In this dissertation, HRBA functions as a tool of critical accountability. It allows researchers situated in Western institutions, whether they be universities or NGOs, to assess whether their collaborative efforts actually support Indigenous governance and autonomy, or simply reproduce existing power asymmetries under a participatory guise. While PAR fosters deep, situated engagement, HRBA provides a structured way to evaluate whether that engagement is translating into respect for collective rights and long-term equity. Used together, these lenses reveal not only what is done in a project, but how it is done, with whom, and on whose terms.

This dual-lens model is applied throughout the remainder of this chapter. In each of the following sections, participatory methods are examined through both interpretive frameworks. Method-specific tables illustrate how particular activities are aligned with HRBA principles and UNDRIP articles. Narrative sections complement this analysis with reflections from participants, facilitators, and institutional collaborators. The final sections synthesize these findings to offer a grounded, reproducible framework for evaluating participatory research in alignment with Indigenous rights.

4.2 Mayuk – Cultural Reflection and Collective Analysis

The Mayuk sessions in Tapurucuara and Yapú were designed to support intergenerational reflection on cultural practices, values, and worldviews. As a participatory game created by Mauricio Beltrán in collaboration with Fundación Colombia Multicolor and community leaders, Mayuk invites participants to sort culturally significant elements, such as rituals, symbols, habits, and beliefs into categories of strength, risk, or transformation. These

sessions functioned as spaces for cultural diagnosis, where participants identified threats to traditional knowledge and shared strategies for revitalization and continuity.

Participatory Interpretation

Interpreted through a PAR lens, Mayuk was not merely a data-gathering tool, but a catalyst for deep conversation and community self-assessment. Each group drew from its own linguistic, generational, and territorial perspective to discuss what strengthens or weakens their culture. Discussions were often led by elders or educators but included youth who brought insights into how cultural transmission is changing. Participants frequently returned to themes such as the erosion of language, the influence of external religions, and the importance of ceremonies in shaping community values.

These interpretations were synthesized in real time through posters, photographs, and facilitator notes. At the end of each session, participants collectively reflected on what had been named and why, often comparing perceptions across different groups. This process aligns with Fals Borda's attempt to address improving quality of life through collective reflection on everyday reality (Fals-Borda, 1987). In this case, that reflection was grounded in cultural memory, but oriented toward future planning and territorial education.

Human Rights-Based Evaluation

Viewed through the HRBA framework, the Mayuk sessions activated several core human rights principles, particularly those related to cultural integrity, participation, and self-determination. The content of the game was adapted to local contexts, and the categories were filled with examples generated by participants themselves. This ensured that the

game did not impose external criteria, but rather amplified community-defined knowledge systems.

In terms of alignment with UNDRIP, the sessions directly supported Article 13, which affirms the right to transmit and protect Indigenous languages and oral traditions, and Article 31, which recognizes the right of Indigenous peoples to control their cultural heritage and traditional knowledge. By positioning Mayuk as both a learning tool and a diagnostic instrument, the project reinforced the role of Indigenous knowledge in defining community priorities.

Table 4.3: HRBA Evaluation of Mayuk Sessions

UNDRIP Article	HRBA Principle	How Principle Was Enacted	Supporting Evidence
Articles 18, 13	Participation	Intergenerational dialogue; inclusion of elders, youth, and women in reflective group work	Group notes, session photographs, synthesis posters
Articles 3, 31	Self-determination	Communities defined the meaning and value of cultural elements; no external criteria imposed	Game outputs, locally contextualized examples, discussion-based modification of content
Articles 13, 31	Cultural integrity	Traditional knowledge was honored and integrated through oral narratives and symbolic categories	Content of game rounds, facilitator reflections, participant quotes
Articles 14, 16	Access to information	Participants discussed how knowledge is passed down or lost within families and institutions	Reflection posters, youth commentary, statements on cultural erosion

The Mayuk activity illustrates how participatory methods can serve not only as expressions of community knowledge, but as mechanisms for enacting rights. Through structured yet flexible facilitation, the sessions created space for communities to interpret their own

cultural realities and to articulate visions for continuity and transformation. When interpreted through both participatory and rights-based lenses, Mayuk emerges as a site of co-authorship, epistemic affirmation, and strategic planning.

4.3 Cachiveras – Designing Communication and Advocacy

The Cachiveras sessions were designed as collaborative game-based workshops to support community-led communication planning. Adapted from a board game format originally developed for environmental education, the version used in Vaupés was recontextualized with support from Fundación Colombia Multicolor and Mauricio Beltrán to reflect the territorial, cultural, and political realities of the participating communities. Through gameplay, participants navigated scenarios involving environmental threats, external pressures, and community responses, and were prompted to develop communication strategies grounded in their own experiences and priorities.

Participatory Interpretation

From a PAR perspective, Cachiveras created a participatory space for strategic thinking and collective problem-solving. Each team worked through simulated challenges, such as illegal logging, governmental extractivism, or misinformation from external actors, and responded with actions based on local knowledge systems, traditions, and institutional roles. The activity emphasized not only what should be communicated, but how, to whom, and for what purpose. In many groups, the process prompted deeper questions about the role of Indigenous youth, the reach of community radios, and the preservation of oral narratives.

Participants translated their strategic responses into visual communication maps using stickers, drawings, and short written messages. These artifacts, along with facilitator notes

and group dialogue, provided a record of how participants envisioned strengthening their collective voice across internal and external spheres. The activity supported the type of “critical dialogue” that is central to PAR, in which participants not only share knowledge but also develop tools for action and reflection (McIntyre, 2008).

The format also encouraged creativity and humor, which emerged as essential elements in building trust and expressing political critique. While the game had a structured flow, facilitation remained flexible, allowing groups to alter scenarios or add culturally specific references. This adaptability reinforced the value of local knowledge in shaping both the process and its outputs.

Human Rights-Based Evaluation

Using the HRBA lens, Cachiveras can be read as a method that operationalized principles of participation, accountability, access to information, and sustainability. It did so by inviting communities to define their own communication goals and develop responses to real and hypothetical threats. The strategies were not abstract; they were grounded in participants lived experiences and often included references to existing community media, leadership roles, and intergenerational responsibilities.

Cachiveras supports Article 16 of UNDRIP, which affirms the right of Indigenous peoples to establish and access media in their own languages. It also resonates with Article 19, which emphasizes the right to be consulted and to give free, prior, and informed consent before actions are taken by external actors. The communication strategies developed in the game can be understood as tools for making these rights actionable by defining the content, medium, and audience of community messaging from the ground up.

Table 4.4: HRBA Evaluation of Cachiveras Sessions

UNDRIP Article	HRBA Principle	How Principle Was Enacted	Supporting Evidence
Articles 18, 16	Participation	Groups collaboratively designed communication responses using visual mapping and scenarios	Group outputs, facilitator notes, session photographs
Articles 15, 19	Accountability	Participants identified target audiences and messages to hold external actors accountable	Communication maps, dialogue transcripts
Articles 14, 16	Access to information	Strategies included internal education, and outreach plans to strengthen informed decision-making	Content of game rounds, facilitator reflections, participant quotes
Articles 16, 31	Sustainability	Communication plans envisioned long-term roles for youth, elders, and local media	Game results, youth reflections, final action steps from session

Cachiveras illustrates how participatory research can serve as a space for building communicative power, rooted in Indigenous ways of knowing and directed toward strategic engagement with external systems. When interpreted through both PAR and HRBA frameworks, the activity highlights the role of participatory methods not only in cultural expression, but in the defense and articulation of collective rights. These insights extend beyond the game itself, offering a grounded model for how information practices can be used to support territorial governance and rights-based advocacy.

4.4 Photostories – Visual Storytelling and Epistemic Visibility

The Photostories workshops invited participants to document everyday life through photography and short narratives, generating a visual and narrative archive of community experience. This participatory photography method, developed by Gómez and adapted for

the Vaupés context, was implemented in both Querarí and Yapú with an emphasis on self-representation, cultural continuity, and local storytelling. Participants used mobile phones to capture scenes of daily practices, natural environments, and social gatherings, and then selected images for group reflection and thematic organization.

Participatory Interpretation

Photostories created space for participants to reflect on their own lives and those of their communities through the lens of cultural knowledge and visual narrative. Images of planting chagras, preparing food, intergenerational learning, and community gatherings became focal points for dialogue, not only about tradition but also about change, risk, and continuity. Participants often used the reflection sessions to elaborate on the meanings behind their images, situating their photographs within broader conversations about identity, territory, and collective responsibility.

These reflections were captured on posters and synthesis sheets, where themes such as “our forest,” “our mothers’ teachings,” or “how we care for the river” emerged organically. The process mirrored core tenets of PAR, where participants are not only contributors to knowledge production but also analysts of their own lived conditions (McIntyre, 2008). This self-interpretive process strengthened narrative agency and offered a community-centered understanding of what matters and why.

In alignment with participatory principles, printed photobooks featuring selected images and quotes were returned to participants in both digital and physical formats. This act of

returning materials affirmed community authorship and allowed for further discussion, sharing, and use within families, classrooms, and organizational spaces.

Human Rights-Based Evaluation

Viewed through the HRBA lens, Photostories directly engaged principles of cultural integrity, access to information, non-discrimination, and gender equity. The method created opportunities for women and youth in particular to represent their experiences, often in ways that are overlooked or marginalized in public discourse. The approach also avoided external interpretation by grounding analysis in participant narratives, with facilitators supporting but not directing the thematic process.

Photostories align closely with Article 16 of UNDRIP, which guarantees the right of Indigenous peoples to establish and access media in their own languages, and Article 31, which affirms their rights to maintain, control, and develop cultural heritage and traditional knowledge. The project's emphasis on visual storytelling also supports Article 13, which addresses the protection of oral traditions and languages, particularly when these are integrated into visual media that circulate within and beyond the community.

Table 4.5: HRBA Evaluation of Photostories Sessions

UNDRIP Article	HRBA Principle	How Principle Was Enacted	Supporting Evidence
Articles 13, 31	Cultural integrity	Participants represented practices rooted in ancestral knowledge and daily experience	Photographic content, participant reflections, thematic posters
Articles 16, 31	Access to information	Printed and digital books returned to participants for local use and interpretation	Facilitator reflections, participant feedback, Diplomado closing ceremony
Articles 15, 22	Non-discrimination	Women and youth actively documented and analyzed community life	Image content, participant rosters, session transcripts
Article 22	Gender equity	Themes highlighted women's labor, caregiving, and knowledge transmission	Poster themes, testimonies from female participants, facilitator reflections

Photostories made visible the knowledge embedded in everyday life, and positioned visual media as a form of epistemic self-determination. By producing and interpreting their own narratives, participants created a counter-archive to dominant representations, one rooted in Indigenous experience and governed by Indigenous voice. When analyzed through the dual lens of participatory interpretation and rights-based evaluation, Photostories demonstrate how information practices can uphold both the dignity and the rights of those historically excluded from authorship.

4.5 Participatory Mapping – Territorial Futures and Planning

The participatory mapping activities in Querarí and Yapú invited participants to create layered visual representations of their territories, combining geographic, symbolic, and historical elements. Each group used large-format paper and color-coded drawings to depict past, present, and desired futures for their communities. These maps reflected not

only spatial knowledge, but also cultural memory, environmental relationships, and governance priorities. Participatory mapping in this context functioned as both a diagnostic and a planning tool, offering a participatory method for envisioning territorial sovereignty grounded in local realities.

Participatory Interpretation

Through a PAR lens, participatory mapping provided an opportunity for collective storytelling and spatial analysis. Participants worked in intergenerational groups to identify sacred sites, traditional pathways, extractive threats, and key landmarks. Many maps included rivers, chagras, and ceremonial sites, as well as new elements such as roads, schools, or REDD+ project areas. The layering of time and ability to reflect and discuss the past, present, and future, enabled a narrative reflection on territorial transformation and cultural continuity.

These maps became sites of discussion, where participants debated what should be included, how to represent contested areas, and what future developments they envisioned. Facilitators supported the process by providing materials and helping organize feedback sessions, but the structure and content of the maps were defined by participants. In this way, participatory mapping acted as a “territorial pedagogy” often found within popular movements, (McCune & Sánchez, 2019) and is consistent with PAR principles that emphasize collective analysis as a foundation for action (Fals Borda, 1987).

The interpretive process did not end with the maps themselves. Groups presented their work to the larger assembly, explaining the symbolism, challenges, and aspirations

embedded in each layer. These presentations often led to thematic discussions about educational needs, environmental threats, and the limits of existing infrastructure or legal recognition. The sessions became planning spaces as much as reflective ones, where communities articulated strategies for preserving land, culture, and autonomy.

Human Rights-Based Evaluation

From an HRBA perspective, participatory mapping sessions enacted principles of self-determination, participation, cultural integrity, and sustainability. By visualizing their own territories and futures, participants exercised the right to define what development should look like in their context. The maps also served as planning tools for education, communication, and REDD+ proposals, aligning with long-term community strategies supported by ASATIQ and ASATRIZY.

Participatory mapping activities are closely aligned with Article 18 of UNDRIP, which affirms the right to participate in decision-making processes through representative institutions, and Article 32, which affirms the right to determine the use and development of lands and territories. The focus on cultural and environmental knowledge also reflects Article 25, which recognizes the spiritual and material relationship between Indigenous peoples and their territories.

Table 4.6: HRBA Evaluation of Participatory Mapping Sessions

UNDRIP Article	HRBA Principle	How Principle Was Enacted	Supporting Evidence
Articles 3, 32	Self-determination	Communities define territorial priorities, futures, and governance visions	Maps, group presentations, thematic discussions
Articles 25, 31	Cultural integrity	Past and present elements included sacred sites, chagras, and ceremonial routes	Map content, participant reflections, facilitator notes
Article 18	Participation	Intergenerational groups collaborated on content and visual representation	Group rosters, facilitator observations, documentation photographs
Articles 29, 32	Sustainability	Future layers emphasized long-term goals (e.g., schools, reforestation, climate resilience)	Visual plans, REDD+ references, participant statements

Participatory mapping offered a visual language through which participants could name their pasts, critique their present, and plan for futures rooted in their own priorities. It made visible the spatial and cultural dimensions of sovereignty and governance, and created records that could be used for advocacy, planning, and intergenerational dialogue. When viewed through the combined lenses of PAR and HRBA, these maps become more than participatory outputs, they also represent community-authored visions of rights, responsibility, and self-determined development.

4.6 Dialogues, Planning, and the Architecture of Collaboration

While participatory methods like Mayuk, Cachiveras, Photostories, and participatory mapping offer clear points of analysis, the most expansive and complex data source in this project is not a single method but a web of relational practices: the dialogues, planning sessions, institutional agreements, facilitation meetings, and post-fieldwork collaboration that shaped every phase of the project. This architecture of collaboration composed of

formal and informal exchanges, shifting expectations, logistical negotiations, and ongoing interpretation, offers the richest material for evaluating the project as a whole.

Participatory Interpretation

From a PAR perspective, these interactions reflect the heart of the methodology.

Participatory research is not defined by tools alone; it is defined by how decisions are made, how power is distributed, and how relationships are sustained over time. In the Vaupés project, planning meetings occurred virtually and in-person, often shaped by the evolving priorities of ASATIQ and ASATRIZY, logistical realities in the region, and the internal dynamics of each partnering institution. At each stage, facilitation strategies were adjusted, participation expanded or contracted, and the meaning of collaboration was renegotiated. This is consistent with McIntyre's view of PAR as "engaging in reflexivity...define as a dialectical process that occurs within the context of the social relationships that exist between research practitioners and participants" ([McIntyre, 2007](#))

The dialogues that bookended each workshop served not only as orientation and reflection spaces, but as feedback mechanisms. Participants used these moments to raise concerns, request adjustments, clarify misunderstandings, or propose new directions. Many of these conversations surfaced competing institutional expectations, differences in facilitation styles, or unanticipated logistical barriers. These tensions are not peripheral to PAR, rather they are central, and they reflect the friction inherent in trying to share decision-making across asymmetrical institutional and community structures.

Although tools like WhatsApp facilitated ongoing coordination, they are not considered traditional data sources here. Instead, they illustrate the relational labor required to keep a participatory project alive between field visits. These channels supported responsiveness, continuity, and relationship maintenance, particularly in a region where in-person meetings were limited by cost, weather, and geography. They formed part of the infrastructure of collaboration rather than its analytical content.

Human Rights-Based Evaluation

Applying the HRBA to this layer of the project is more difficult than with activity-based methods, but it is arguably more important. The HRBA principles, especially self-determination, participation, transparency, accountability, and sustainability, are not just ideals to be applied to project outputs; they are standards by which the entire governance structure of a project can be assessed. In this case, the evaluation focuses on whether institutional partners respected community decision-making, responded to feedback, maintained open lines of communication, and shared power over time.

For example, ASATIQ and ASATRIZY determined the locations of sessions, identified facilitators from their territories, and reviewed proposed methodologies in advance. These actions aligned with Article 18 (the right to participate in decision-making) and Article 19 (the right to give or withhold consent prior to interventions). However, institutional timelines and external funding constraints also shaped aspects of implementation, occasionally producing moments of misalignment between community priorities and organizational procedures. The ability to name, discuss, and adjust to those tensions is part of what makes a PAR project both ethical and resilient.

This section also touches on Article 27, which requires states, and, by extension, institutions acting within their authority, to recognize Indigenous peoples' own systems of governance and adjudication. While this project did not involve state actors, it required universities and NGOs to operate within the governance frameworks of ASATIQ and ASATRIZY, rather than imposing academic or administrative timelines unilaterally.

Table 4.7: HRBA Evaluation of Collaborative Infrastructure

UNDRIP Article	HRBA Principle	How Principle Was Enacted	Supporting Evidence
Article 18	Participation	ASATIQ and ASATRIZY co-designed sessions and chose facilitation teams	Meeting agendas, facilitator logs, participant lists
Articles 3, 19	Self-determination	Community organizations shaped project goals, timelines, and review processes	Planning documents, correspondence, feedback from ASATIQ/ASATRIZY
Articles 19, 27	Accountability	Feedback loops allowed for adaptation in response to concerns and tensions	Facilitator reflections, session revisions, follow-up interviews
Article 19	Transparency	All partners shared plans, budgets, and materials in advance or in dialogue	Institutional agreements, session notes, presentation materials

This collaborative infrastructure is difficult to represent in charts or outputs, but it is central to the integrity of participatory research. It reflects not only what the project did, but how it was held together, who made decisions, and how institutions navigated their responsibilities to the communities they partnered with. By applying the HRBA to this less tangible but foundational layer, this chapter underscores the importance of evaluating the architecture of collaboration itself, the foundational structure that is required to implement any project, and not just the tools or outputs that emerge from it.

4.7 Synthesis and Cross-Cutting Themes

The preceding sections have examined each major component of the Vaupés project through the dual interpretive framework of participatory action research (PAR) and the human rights-based approach (HRBA). Each method, as well as the broader architecture of collaboration, was analyzed for how it generated knowledge, fostered co-authorship, and aligned with Indigenous rights articulated in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). While each section highlighted distinct contributions, a number of cross-cutting themes emerged that speak to the coherence of the project's participatory and rights-based commitments.

The analysis presented in this chapter reveals four key insights that shape the dissertation's broader argument about participatory information science and ethical collaboration:

1. Integration of Cultural Knowledge and Strategic Action

Across all methods, the consistent anchoring of content in cultural knowledge was not a byproduct but a central intention. Whether through oral storytelling in Photostories, territorial symbolism in maps, or ritual elements in Mayuk, the project elevated Indigenous frameworks as foundational. At the same time, each method functioned as a tool for strategic reflection, supporting REDD+ planning, communication strategies, or territorial education initiatives. This integration demonstrates that participatory research, when grounded in local epistemologies, can simultaneously support cultural continuity and forward-looking planning. The tools did not merely surface information, they also

facilitated situated analysis and future-oriented action, reinforcing the idea that knowledge production and territorial governance are inseparable in Indigenous contexts.

2. Participation as Governance, Not Just Method

The architecture of collaboration described in Section 4.6 underscored that participatory research is not defined only by its activities but by the governance practices embedded in its design. In this case, the project upheld principles of self-determination and participation not only by including communities in workshops, but by positioning ASATIQ and ASATRIZY as co-governors of the process. Decisions about site selection, facilitation roles, and thematic priorities were made through ongoing dialogue, demonstrating that research governance is a relational and iterative practice. This finding extends existing PAR theory by emphasizing that participation must be institutionalized through decision-making structures and not just merely performed through inclusive activities.

3. Visual and Narrative Tools as Mechanisms of Epistemic Justice

Throughout the project, the emphasis on visual and narrative methods created opportunities for participants to reclaim their image, voice, and interpretive authority. This was especially important for youth and women, who used these tools to represent experiences often excluded from institutional narratives. The project therefore advanced not only the right to participation, but also the right to be seen and heard on one's own terms, a form of epistemic justice closely linked to Articles 15 and 16 of UNDRIP. These methods supported more than representation, they also helped redistribute the power to

define what counted as meaningful knowledge, challenging dominant frameworks within information science and communication planning.

4. Addressing Tensions through Reflexive Design

While many aspects of the project aligned with HRBA principles, several tensions were also present. Institutional timelines sometimes conflicted with community rhythms. Facilitation approaches had to be adjusted in response to unexpected dynamics. Power imbalances between NGOs, universities, and community organizations required continual negotiation. Rather than obscuring these tensions, this chapter recognizes them as inherent to participatory work. What mattered was not the absence of conflict, but the presence of mechanisms for addressing it through reflection sessions, institutional accountability, and sustained communication. These findings suggest that rights-based principles are not only evaluative tools, but essential scaffolding for navigating the complexity of long-term collaboration.

Table 4.8: Cross-Method Alignment with HRBA Principles

HRBA Principles	Project Evident	Community Evident
Endogenous	Institutional planning, session review	Project activities were reviewed and approved by Indigenous organizations.
Participatory	All methods	Broad inclusion across age, gender, and institutional roles.
Equitable	Group compositions, i.e. by community, and by creating women specific groups	Women's roles were recognized and highlighted in content and facilitation.
Self-Sustaining	Long term collaboration with NGO	Community capacity building, ongoing iteration of project planning and objectives
Sustainable & Environmentally Protective	REDD+ preparation	Outputs contributed to long-term territorial governance and education
Culturally Appropriate	Refinement, adaptation of methods for cultural and community context	Methods centered cultural expression and ancestral knowledge
Self-Managed	Social mapping, project governance	Communities led the definition of priorities, locations, and outcomes.
Democratic	Diverse participation, across communities and generations	Women, youth, elders shared central roles in content creation and interpretation
Accountable	Dialogues, post-session planning	Feedback loops shaped facilitation and institutional commitments.

Together, these themes demonstrate the value of applying a dual-lens evaluation model that integrates participatory interpretation with a structured rights-based framework. This approach makes visible not only the methodological strengths of the project, but the ethical and political commitments embedded in its structure. It provides a way to assess participatory research not only by what it generates, but by how it builds and sustains relationships, distributes power, and aligns with internationally recognized rights.

4.8 Conclusion

This chapter has demonstrated how participatory information science practices, when grounded in Indigenous priorities and relational ethics, can be meaningfully evaluated through a combined interpretive framework. By applying the principles of Participatory Action Research (PAR) alongside a Human Rights-Based Approach (HRBA), the chapter assessed both the outputs and the underlying structures of the Liderazgo, Comunicación y Cambio Climático project in Vaupés.

Each method was not only a site of knowledge production, but a site of rights enactment. These practices reflect deeply commitments to self-determination, participation, cultural integrity, and accountability. The evaluative framework developed here adapted the HRBA from a legal and policy orientation to a grounded tool for assessing whether participatory research upholds the collective rights of Indigenous peoples as outlined in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). In doing so, the chapter moves beyond assessing research by its outcomes alone and toward understanding research as a structure of ongoing governance, negotiation, and commitment.

The value of this dual-lens framework lies not in standardization, but in reflection. It offers a way for researchers and institutions to examine whether their collaborative practices live up to the ethical and legal standards they often cite. It also provides a flexible but rigorous method for interpreting participatory projects in contexts where power, history, and territory matter.

These findings also offer theoretical implications that refine how participatory action research and human rights-based approaches are applied in practice. While PAR is often framed as a mode of co-inquiry and empowerment, this project demonstrates that its

transformative potential depends not only on method selection but on institutional flexibility, long-term facilitation, and shared governance. In contexts where external timelines and institutional pressures shape the scope of engagement, PAR must contend with, and in many ways be adapted to the constraints that cannot be resolved through participatory method alone.

Similarly, this research extends the HRBA beyond its legal origins and positions it as a practical evaluative tool. Rather than treating HRBA principles as abstract ideals, the Vaupés project used them to structure decision-making, facilitate consent processes, and assess equity and inclusion throughout implementation. By documenting where and how these principles were upheld, adapted, or challenged, the project illustrates that HRBA can be operationalized not only to critique extractive practices, but to guide the development of accountable and culturally grounded systems of collaboration.

Most significantly, it is in their combination that PAR and HRBA revealed their full analytical power. Where PAR illuminated dynamics of participation, learning, and epistemic agency, HRBA brought visibility to rights-based claims, institutional responsibility, and long-term sustainability. The dual-lens framework thus offers a new model for evaluating collaborative information-science projects in Indigenous contexts, and one that centers both process and principle, and that is attuned to the historical and political terrain in which such work unfolds.

Chapter 5 builds on this analysis by returning to my central research questions. It offers a broader discussion of how the findings presented here speak to the possibilities, limitations, and tensions of human rights-based participatory research. It asks not only whether the work is aligned with its commitments, but what that alignment reveals about

the future of information science grounded in justice, accountability, and Indigenous leadership.

Chapter 5. What the Work Reveals

Reframing Participation and Accountability Through a Rights-Based Lens

5.1 Introduction: From Evidence to Interpretation

The following chapter marks a turning point in the dissertation and the space where I hope to find meaning behind the work that has been completed, and all of the time and experience that has contributed to the creation of this document. Where the threads woven through each previous chapter are drawn together and examined through the dual lens of Participatory Action Research (PAR) and the Human Rights-Based Approach (HRBA).

These frameworks do not simply serve as analytic categories. They are, for me, tools of accountability, shaped by years of working alongside Indigenous communities and developed in response to a question I have carried throughout this entire process: what does ethical research require, and how do we know when we have done it well?

This dissertation has taken eight years to complete. During that time, I worked in Chiapas, Mexico with Tseltal Maya communities and in Sucusari, Peru with Maijuna communities, before being invited to participate in the work in Vaupés that has now become the central site of this study. These earlier collaborations were not preliminary fieldwork in the conventional sense. They were formative experiences that helped shape who I am as a researcher and how I understand my role in community-based work. In Chiapas, I witnessed the strength of Tseltal-led systems rooted in relational care and collective governance. In Sucusari, I saw how environmental stewardship and information access were braided together through participatory mapping and local leadership. Each of these experiences informed not only the methods we later applied in Vaupés, but also the ethical sensibilities that have anchored this entire project.

This chapter focuses on what the research in Vaupés reveals. It draws on the findings presented in Chapter 4, but it does not rehash them. Instead, it interprets them in light of the frameworks introduced in Chapter 2 and the commitments described in Chapter 3. The central task here is to ask what became possible through the collaborative structure of the diplomado, what remained constrained, and what these outcomes tell us about the possibilities and limits of participatory research in the information science field. At every step, I return to the core research questions, not to answer them definitively, but to reflect on the tensions, insights, and responsibilities that emerged through the work.

The structure of this chapter reflects that purpose. The following sections analyze the diplomado's outcomes through the framework of using PAR, then through the HRBA framework, before examining how the two converge and diverge. I then discuss the scope and limitations of this study, not as flaws, but as clarifying boundaries rooted in time, relationship, and institutional evolution. Finally, I reflect on what this all means for the field of information science, and I offer a tangible tool that is a grounded evaluative approach that other researchers might adapt to their own work.

It is also important to name the moment in which I write this. As of 2025, scientific research in the United States faces renewed political pressure. Institutions that once supported public knowledge production have come under threat. Federal and State-level legislation has curtailed the scope of diversity and equity programs in higher education. NGOs that rely on public funding to support participatory and justice-oriented work face increasingly restrictive criteria. These conditions are not a backdrop to this research; however, they are part of its urgency. If state structures are no longer reliable stewards of ethical research, then it falls on researchers and institutions to adopt frameworks that offer

internal mechanisms of accountability. For me, this is the reason to center the HRBA not just as a normative reference, but as a method of evaluation and as a tool for naming harm, recognizing relational integrity, and holding ourselves to a standard when policy and funding structures fail to do so.

This chapter, then, is both analytical and personal. It reflects on what I have learned, not just about participatory methods or institutional collaboration, but about the moral and political stakes of doing this work well. It asks what others can learn too: about the challenges of co-design, the uneven terrain of participatory engagement, and the necessity of evaluation frameworks that center rights, equity, and Indigenous self-determination. The insights that follow are grounded in the Vaupés case, with supporting comparisons to Chiapas and Sucusari used only where they offer meaningful contrast or illumination. Together, these reflections help surface what participatory, human rights-based research can reveal, not just about the systems we design, but about the systems we inhabit.

5.2 Revisiting the Research Questions

This dissertation began with a central concern: how can collaborative information-science projects between Indigenous authorities, NGOs, and academic institutions support knowledge co-creation, advance decolonial practice, and uphold community-defined development goals? This concern emerged not only from academic literature but also from direct involvement in projects conducted in Chiapas, Sucusari, and most extensively, Vaupés. It reflects both an intellectual inquiry and a political commitment to participatory research that serves community priorities rather than institutional agendas.

The primary research question guiding this study was:

RQ: How do collaborative information-science projects between Indigenous authorities (ASATIQ and ASATRIZY), NGOs, and academic institutions in Vaupés, Colombia, facilitate knowledge co-creation, advance decolonial practice, and support community-defined development goals?

To address this question, the study was organized around two interrelated subquestions:

RQ1.1 What strategies are used to engage Indigenous communities in the co-design, management, and dissemination of information systems, and how do these strategies align with local governance structures and knowledge systems?

RQ1.2 How can a dual participatory and rights-based framework be used to evaluate both the collaborative dynamics and the outcomes of these projects, including power relations, community benefits, and long-term sustainability?

Chapters 3 and 4 provided the empirical foundation for exploring these questions. Chapter 3 detailed the participatory methodologies employed during the Diplomado en Liderazgo, Comunicación y Cambio Climático, including participatory mapping, Photostories, the Mayuk and Cachiveras games, and structured dialogues with elders, women, and youth. It also contextualized the roles of partnering institutions, the governance structure of the diplomado, and the broader REDD+ initiative in which this work was embedded. Chapter 4 then presented the empirical findings, organized thematically around five key domains of collaboration: territorial governance, cultural preservation, intergenerational knowledge transmission, gender inclusion, and community-led project planning.

This chapter returns to the research questions not to answer them categorically, but to interpret their implications. The goal is not closure, but insight into the conditions under which collaboration supports or undermines Indigenous agency; into the methodological

practices that either reproduce or disrupt extractive tendencies; and into how participatory information science might reimagine its ethical, political, and practical commitments.

Interpretation is guided by the dual framework at the heart of this dissertation:

Participatory Action Research (PAR) and the Human Rights-Based Approach (HRBA).

These are not treated as parallel or interchangeable logics. Rather, they offer distinct yet complementary tools for examining the processes, relationships, and outcomes that emerged in Vaupés. PAR foregrounds collective inquiry, local leadership, and reflexive engagement. HRBA insists on accountability, equity, and the recognition of Indigenous peoples as rights-bearing subjects. Together, they provide a lens for asking: how did participation unfold, who benefited, what challenges persisted, and under what terms can these initiatives be evaluated as meaningful, ethical, and just?

The sections that follow interpret the findings of this study through each framework in turn. Section 5.3 reflects on how PAR principles were enacted in practice. Section 5.4 examines how the HRBA shaped institutional arrangements and illuminated points of both alignment and tension. Section 5.5 then considers the intersections and divergences between these two approaches, setting the stage for a broader discussion of the study's contributions to information science in the remaining sections of the chapter.

5.3 Participatory Action Research in Practice

Participatory Action Research (PAR) has long emphasized the importance of dialogic engagement, co-production of knowledge, and community-driven transformation. In this dissertation, PAR was not only a methodological foundation but also a guiding ethic: a way

to structure research around collective reflection, iterative adaptation, and shared governance. The Diplomado en Liderazgo, Comunicación y Cambio Climático provided a structure through which these principles could be enacted, but it was through the participatory tools themselves and the facilitation practices that supported them, that PAR came into practice.

In the diplomado, tools such as participatory mapping, Photostories, Mayuk, and Cachiveras were central to the engagement process. These methods allowed participants to articulate their knowledge, document their lived experiences, and reflect on their visions for development. They were also designed to accommodate multiple modes of expression enabling intergenerational and cross-gender participation.

The use of Photostories, for example, was informed by a long trajectory of participatory photography methods developed by Gómez. The method was initially shaped through collaborations with migrant communities and was later adapted to Indigenous contexts in Chiapas as part of a community wellness toolkit ([Gomez, 2024; Gomez & Gould, 2010; Gomez & Vannini, 2017](#)). In that setting, Photohistories were integrated into a broader system of community media and knowledge documentation, grounded in Tseltal values and relational practices. That work directly informed the version introduced in Vaupés, which retained the emphasis on narrative and community reflection, while incorporating environmental themes and cultural documentation specific to the region.

Similarly, the Mayuk game was originally developed in Chiapas by Mauricio Beltrán, and its name, a Tseltal word meaning “there is none” or “there is none left” ([Gomez et al., 2024, 2018](#)). It was later adapted for the diplomado, where it was used in the Querarí and Yapú sessions to reflect on the symbolic and practical elements of cultural resilience. While the

structure remained similar, the content of the game was recontextualized based on local beliefs, river-based knowledge, and community concerns in Vaupés.

The Cachiveras game, likewise, was adapted from a well-known format, chutes and ladders, and retooled as a participatory exercise in strategic communication. Beltrán had previously used versions of this tool in other Indigenous communities to support message development and audience identification. In the diplomado, it was used to help participants clarify their goals, map out potential challenges, and design communication plans tailored to local contexts. The game format created space for collaborative discussion, laughter, and debate, while also surfacing serious insights about organizational planning and advocacy. The participatory mapping exercises in the diplomado were led by researchers from UNAD, who brought extensive experience working with communities on participatory cartography. His facilitation emphasized both geographic and symbolic dimensions of territorial knowledge, allowing participants to represent rivers, ancestral sites, and community histories in ways that were grounded in local cosmologies. While I did not lead these activities, my previous experience working in Sucusari, Peru, where communities engaged in participatory mapping through long-standing collaborations with Michael Gilmore and Jason Young, shaped how I understood the process in Vaupés. In Sucusari, mapping had been a central practice in planning digital infrastructure and asserting territorial rights, and that context informed how I recognized the value and political significance of mapping as a participatory practice in the diplomado. Though the methods and settings were distinct, both reflected an ongoing dialogue between lived territorial knowledge and collective planning.

These tools were not imported wholesale into Vaupés. Each one was revised through dialog with collaborators, local facilitators, elders, and youth. This responsiveness was not incidental to the process, rather it was central to maintaining the integrity of participatory engagement. Facilitators often met between sessions to revise activities, integrate feedback, and consider how best to support community-defined outcomes. In some cases, this meant slowing the pace. In others, it meant revisiting themes that emerged organically during group discussion but had not been part of the original plan.

Of course, participation was not uniform across all sessions or communities. Logistical and temporal constraints, including travel time, institutional timelines, and weather-related delays, limited the ability to return to certain communities or extend discussions beyond planned formats. At the same time, these constraints were anticipated, and the methods were intentionally chosen to accommodate flexibility. The use of analog tools helped bridge digital divides and allowed for more inclusive participation, especially in intergenerational contexts.

Taken together, the participatory practices deployed in the diplomado reflect an evolving methodology that draws on earlier experiences, adapts in response to local conditions, and centers collective reflection as both method and outcome. This continuity of learning, grounded in previous collaborations and sustained community relationships, underscores the value of participatory research as a living process. It also affirms the potential of PAR to support not only data collection or system design, but deeper conversations about culture, power, and the future of Indigenous governance.

5.4 The Human Rights-Based Approach in Action

This section interprets the findings of the diplomado through the evaluative lens of the human rights-based approach (HRBA), as articulated in Chapter 2. This framework builds on the collective rights affirmed in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), while advancing a set of actionable principles that guide ethical development: that it be endogenous, participatory, self-managed, culturally appropriate, equitable, accountable, and sustainable (Charters & Stavenhagen, 2009). Rather than serving as an external checklist, these principles offer a normative and relational grounding for evaluating whether the collaboration supported Indigenous leadership and self-determination.

Applied to the Vaupés case, these criteria help illuminate both the strengths and the tensions of the project. The diplomado was rooted in community-defined priorities, guided by territorial authorities ASATIQ and ASATRIZY, and structured around dialogic, iterative sessions. Participation was embedded not just as a method, but as a condition of governance. The methods themselves were designed to be culturally appropriate and accessible, drawing from oral tradition, symbolic knowledge, and collective memory. Through these tools, the diplomado supported endogenous planning, emphasizing locally grounded visions for forest conservation, food sovereignty, intergenerational knowledge, and gender inclusion.

At the same time, the HRBA framework helps make visible where structural tensions persisted. While the diplomado promoted transparent communication and mutual learning, its position within a larger REDD+ framework introduced external expectations that required continual negotiation. These are not failures, but they are precisely the kinds

of complexities that the HRBA helps bring into view: how collective rights can be supported in practice, and where institutional architectures must adapt.

Across sites, the HRBA revealed different dimensions of these tensions. In Chiapas, community radio and multilingual libraries were integrated into a trilingual information system that centered autonomy but also relied on long-standing Jesuit infrastructure. In Sucusari, participatory mapping and digital connectivity were pursued in parallel with biodiversity conservation goals shaped in part by international funding partners. In each case, the HRBA draws attention to questions of sustainability, equity, and voice: who defines the scope of participation, how are community benefits secured, and how is long-term governance structured?

As I finalize this chapter in 2025, I cannot ignore the broader context in which this reflection is taking shape. In the United States, research institutions are facing intensifying political pressure. Federal proposals to eliminate the Institute of Museum and Library Services, politicized scrutiny of National Science Foundation grantmaking, and legislative attacks on diversity and equity programs are reshaping the landscape of academic research. NGOs that rely on public funding face new constraints on what kinds of work are considered permissible or fundable. These shifts are not theoretical, they affect which projects move forward, which knowledge is recognized, and who gets to speak on behalf of whom.

Ongoing assaults on Indigenous sovereignty in the region including Ecuador, Brazil, and Colombia, deregulation of environmental policy, and ongoing privatization efforts are the realities Indigenous communities are facing ([Aguilar, 2025; Díaz & Collins, 2025; Frontlines, 2025](#)).

I do not raise this to make a general political statement, but rather to underscore why human rights-based evaluation frameworks matter. When governing bodies lose credibility, or when they actively undermine the public good, it becomes even more important for researchers and institutions to commit to ethical practices that are internally coherent and externally accountable. For communities like those in Vaupés, which already face deep historical and structural marginalization, participatory research must not depend on the reliability of external institutions. It must be safeguarded by frameworks that center dignity, sovereignty, and long-term self-determination.

The HRBA, as used here, offers one such safeguard. It does not replace the complexities of relational work, but it provides another way to hold that work to account. It reminds us that research is never neutral, that power is always present, and that the responsibility to protect collective rights does not expire when a grant cycle ends. This section, then, reflects both the promise and the ongoing challenge of embedding human rights-based evaluation into information science practice, not as a rhetorical gesture, but as a durable ethical commitment.

5.5 Convergences and Tensions Between PAR and HRBA

This work employed a dual-lens analytical framework grounded in Participatory Action Research (PAR) and the Human Rights-Based Approach (HRBA), not as parallel tracks, but as intersecting methodologies with complementary and at times divergent orientations. Together, these frameworks provided both a normative foundation and a practice-oriented guide for ethical engagement, collaborative system design, and institutional critique. Their

combination enriched the analysis by illuminating different facets of the same empirical terrain.

Convergences: Mutual Accountability, Participation, and Co-Governance

At their core, both PAR and HRBA prioritize the agency and authority of historically marginalized communities. In this research, their overlap was most evident in the areas of mutual accountability, community leadership, and co-governance. The diplomado process in Vaupés consistently emphasized collective decision-making, respect for Indigenous governance structures, and iterative reflection. These are hallmarks of PAR's emphasis on shared inquiry and transformation, but they also directly align with HRBA principles such as participation, self-determination, and cultural integrity.

For example, decisions about workshop locations, facilitation structures, and thematic priorities were not imposed externally, but shaped by ASATIQ and ASATRIZY in coordination with institutional partners. This co-governance structure operationalized PAR's ethic of community-defined research while enacting HRBA's legal commitment to Indigenous peoples' rights to define and control development affecting their territories, as articulated in Articles 18, 23, and 31 of UNDRIP. The frameworks worked together to center relational process and political legitimacy in the project's design and evaluation.

Tensions: Emergence vs. Standardization

Despite these areas of resonance, key tensions emerged, particularly around the frameworks' epistemological orientations and institutional implications. PAR is inherently emergent, relational, and contextual. It embraces reflexivity, iterative adaptation, and the

unpredictability of human collaboration. HRBA, by contrast, carries the weight of institutional standardization. Its foundations in international law bring a powerful rights-affirming structure, but one that is sometimes rigid in application, or not truly applied or recognized in practice.

This tension surfaced in moments where institutional actors sought to evaluate the diplomado through measurable outcomes, timelines, and documentation practices. While HRBA supports transparency and accountability, it can, in practice, reinforce bureaucratic logics that conflict with the slower, trust-based rhythms of PAR. Similarly, HRBA's emphasis on formal recognition of rights, while vital in legal and policy contexts, can underplay the more relational and culturally embedded forms of authority that PAR foregrounds.

Complementary Insights: What Each Framework Made Visible

The value of combining these frameworks lies in how each made visible what the other might overlook. PAR illuminated the lived dynamics of participation: who spoke, who led, how facilitation unfolded, and how knowledge traveled within and beyond the workshop space. It helped identify moments of community assertion, intergenerational learning, and culturally grounded communication that might otherwise be dismissed as anecdotal or informal.

HRBA, by contrast, provided a structure for evaluating institutional commitments. It clarified the responsibilities of NGOs, universities, and funding agencies, not just to “engage” communities, but to respect their rights to free, prior, and informed consent; to

ensure access to information; and to support sustainable, non-discriminatory, and culturally appropriate development. Where PAR focused on the process from the inside, HRBA offered a critical lens on the broader systems shaping that process.

Toward a Complementary Methodological Toolset

Used together, PAR and HRBA create a robust methodological toolkit for participatory information science. PAR grounds the research in relational ethics and lived practice, while HRBA aligns that practice with internationally recognized standards of justice and Indigenous sovereignty. Their combination resists both technocratic extractivism and romanticized collaboration. It enables researchers to evaluate not only what is done, but how and with what structural implications.

For future researchers and practitioners, this dual-lens approach offers a pathway for balancing local responsiveness with institutional accountability. It is not without its frictions, however, those frictions are productive because they can force critical engagement with competing timelines, priorities, and worldviews. They invite a research practice that is at once grounded and principled, adaptive and rights-affirming, and finally, experimental and committed. In the context of Vaupés, this combination helped support a collaborative process that was imperfect but deliberate in its efforts to center Indigenous leadership and uphold collective rights. It remains an open question how this model might evolve in future iterations, but its foundation offers a meaningful starting point.

5.6 Limitations and Boundaries of Scope

This section acknowledges the constraints and scope boundaries of the research, not as methodological failures, but as clarifying contours that define what this dissertation claims, and what it does not or cannot. These limitations reflect the realities of collaborative, participatory research conducted within dynamic institutional contexts and Indigenous territories. Recognizing them is part of a broader commitment to transparency, reflexivity, and epistemic humility.

5.6.1 Temporal Limitations

The data and analysis presented in this dissertation reflect a specific temporal window: 2021–2023, corresponding to the early phases of the *Diplomado en Liderazgo, Comunicación y Cambio Climático*. This period marked the initial implementation of participatory methods across multiple sessions and locations in the Vaupés region, involving a broad cross-section of over 100 Indigenous leaders and participants from ASATIQ and ASATRIZY.

While the broader partnership between Wildlife Works and Indigenous associations is envisioned as a 10-year collaboration linked to REDD+ governance and long-term territorial planning, this dissertation does not attempt to evaluate the full arc of that initiative. The findings here represent a snapshot of a dynamic, evolving process, and a formative moment in a much longer engagement.

5.6.2 Institutional Transitions

The research design and facilitation described in Chapters 3 and 4 were shaped by a collaborative team that included Fundación Colombia Multicolor, the Universidad Nacional Abierta y a Distancia (UNAD), and the University of Washington Information School. However, institutional roles shifted after 2023. The UW iSchool's formal participation concluded with the end of funding and the closure of academic partnership agreements. While Fundación Colombia Multicolor and UNAD have continued their engagement, their roles and relationships have evolved in ways that fall outside the scope of this study.

This dissertation, therefore, does not claim insight into institutional decisions or collaborations that occurred after the 2023 research period. Instead, it focuses on the period of direct involvement and the conditions under which participatory methods were implemented and evaluated during that time.

5.6.3 Methodological Reflections

The participatory methodologies employed were designed to accommodate the geographic dispersion of participating communities, as well as the constraints posed by weather, travel logistics, and availability of local facilitators. While one hundred participants were involved across the three diplomado sessions, attendance and participation varied across sites and activities.

This variability is not viewed as a weakness, but as an inherent characteristic of community-led research in remote regions. The methodological design prioritized flexibility, cultural responsiveness, and collective reflection over standardization or

replicability. These trade-offs shaped both what could be documented and how the data were interpreted.

Comparative insights from Sucusari (Peru) and Chiapas (Mexico) reinforce this point. In Sucusari, a prior pilot study illustrated the challenges of building digital infrastructure in the absence of sustained investment and demonstrated how failed ICT interventions can leave lasting impacts. The long-term mapping work led by Gilmore and Young helped me understand the required commitment and emphasized the necessity of durable relationships and community continuity. In Chiapas, the development of integrated information systems by Tseltal communities underscored how deep trust, built over decades, created the conditions for truly collaborative design. These experiences informed the Vaupés research team's sensitivity to process, pacing, and the importance of scaffolding engagement through local leadership.

5.6.4 Representational Limits

The analysis presented in this dissertation is grounded in observed interactions, translated outputs, and participant reflections generated during the diplomado. While the research design sought to include a diversity of voices, ranging across generations, genders, and community roles, it does not claim to represent the full spectrum of perspectives within ASATIQ, ASATRIZY, or the wider Vaupés region. Nor does it purport to fully translate Indigenous epistemologies into Western academic categories, which would risk erasure through interpretation.

Instead, the work privileges situated knowledge produced through specific, co-constructed activities. Where quotations or examples are included, they are drawn from dialogic moments that participants chose to make visible. This is not a comprehensive ethnographic account, but an account of collaborative knowledge-making under defined ethical agreements. The limitations of representation here are acknowledged as part of an ongoing commitment to consent, respect, and epistemic integrity.

5.7 Implications for the Field of Information Science

The findings presented in this dissertation respond directly to the central research question: How do collaborative information-science projects between Indigenous authorities, NGOs, and academic institutions facilitate knowledge co-creation, support community-defined development goals, and advance decolonial practice? This section addresses the broader implications of that inquiry for the field of Information Science. It does not present these implications as optional extensions or applications, but as necessary reflections on the ethical and political responsibilities of a field that increasingly shapes global systems of knowledge, governance, and development. Grounded in the experiences of ASATIQ and ASATRIZY in Vaupés, and informed by work in Chiapas and Sucusari, the following analysis insists that research and system design are never neutral. If Information Science is to be inclusive, it must go beyond methodological reform and confront how innovation, participation, and progress are embedded in, and in many ways complicit with, broader structures of inequality and environmental harm. The integration of PAR and HRBA in this study offers one pathway for rethinking what ethical, rights-aligned information science can and must look like.

Information Science is often described as sitting at the intersection of people, information, and technology. This framing implies a human-centered orientation that values inclusivity and applied social relevance. Yet this positioning alone does not absolve the field from grappling with the extractive, racialized, and colonial legacies embedded in both research practice and technological systems. Precisely because Information Science spans disciplinary boundaries, from computer science and engineering to the social sciences and humanities, it carries a unique responsibility to interrogate how knowledge is produced, who benefits, and at whose expense.

This dissertation calls for a deeper reckoning with how concepts such as “participation,” “design,” “access,” and “impact” are framed and enacted within the field. Terms like “inclusion” and “user-centered design” often mask the structural asymmetries that shape knowledge production and technological development. Participatory Action Research (PAR) offers a powerful corrective to these dynamics by re-centering communities as co-creators of knowledge. However, even PAR, especially when taken up in technocratic or institutionally constrained ways, can be insufficient. In practice, participatory methods are often deployed without a corresponding shift in power, accountability, or long-term governance.

The Human Rights-Based Approach (HRBA), as adapted in this study, offers a necessary extension to participatory frameworks. HRBA not only insists on participation but situates it within a legal and moral framework that recognizes collective rights, especially the rights of Indigenous peoples. This reframing is critical in information science, where innovation is often treated as inherently positive, and where “progress” is frequently defined in ways that ignore its environmental and social costs. Whether through digital infrastructure, data

collection, or system design, the field must ask: who is included in this future, and who or what is sacrificed to get there?

This question is particularly urgent in communities already marginalized by state policies, extractive development, and settler governance structures. The promise of technological advancement often comes hand-in-hand with deeper entrenchment of inequality, the exploitation of natural resources, and the erosion of local knowledge systems. In contexts like Vaupés, Colombia, where ecological integrity, cultural survival, and Indigenous governance are tightly intertwined, information systems are never neutral. Their design, implementation, and governance reflect broader struggles over land, power, and the right to self-determination.

What this research demonstrates is that participatory, culturally grounded methodologies must be paired with explicit frameworks of rights and responsibility. Methodologies like participatory mapping, Photostories, and serious gameplay, are not merely tools for engagement, they are also vehicles through which communities can articulate their priorities, define their own futures, and assert control over the systems that impact their territories and daily lives. However, it is important to understand, that for these tools to truly serve community-defined development, they must be embedded in structures of accountability that extend beyond the lifespan of any individual project.

For information science scholars and practitioners, this means resisting the impulse to view participation as a checklist, innovation as inherently good, or equity as an afterthought. It means recognizing that the design and deployment of information systems are always political acts; and it also requires a shift from measuring outcomes in terms of

efficiency or scalability to evaluating whether those systems align with principles of justice, sustainability, and collective rights.

As such, the integration of HRBA into information science research offers not only a theoretical contribution, but a practical one. It demands that research and development efforts be assessed not just on their deliverables, but on their adherence to the standards set by those most affected. It opens space for a more accountable, relational, and decolonial practice of information science, and one that does not simply imagine a better future but commits to building it in collaboration with those who have long been excluded from its design.

5.8 A Tangible Tool for Researchers

This dissertation offers a practical methodological contribution to the field of information science and to interdisciplinary researchers working with Indigenous communities: a reflexive evaluation tool that integrates Participatory Action Research (PAR) and Human Rights-Based Approach (HRBA) principles. This tool is not a checklist or a procedural manual. Instead, it is a flexible, values-driven framework for assessing the depth, equity, and ethical grounding of collaborative research efforts.

The foundation of this tool lies in the synthesis developed throughout the dissertation: PAR offers an approach to research that centers relational accountability, processual learning, and co-production of knowledge; HRBA establishes a normative standard based on international Indigenous rights and demands attention to structural obligations, legal frameworks, and collective entitlements. When brought together, these frameworks enable researchers to evaluate projects on more than technical success or participatory optics.

They ask whether communities shaped the agenda, whether outcomes aligned with their self-determined goals, and whether the processes respected both relational ethics and formal rights.

The dissertation's analytical work, especially in Chapters 4 and 5, demonstrates how this integrated lens helped identify moments of alignment and dissonance in the Vaupés project. For example, workshops where ASATIQ and ASATRIZY led planning and facilitation reflected both PAR and HRBA principles, grounded collaboration and self-determination in practice. On the other hand, moments where institutional timelines constrained community priorities revealed points where a rights-based standard could be used to question the legitimacy of external expectations.

As a methodological contribution, this tool encourages researchers to:

- Evaluate not only what methods were used, but how decisions were made, who benefited, and who was accountable.
- Identify where power was shared, and where institutional structures limited meaningful participation.
- Reflect on how cultural and epistemic specificity was centered or diluted in the name of scalability, innovation, or deliverables.
- Assess how legal and ethical rights, especially Indigenous rights to knowledge, land, and governance, were enacted, deferred, or reinterpreted through the research process.

This evaluative tool is designed to be adaptable across diverse contexts. While grounded in Latin American Indigenous territories, the principles can guide research in any setting where power asymmetries, historical marginalization, and questions of community sovereignty are at stake. It is especially relevant for projects situated at the intersection of

technology, governance, and social development, whether in international development, digital equity, environmental planning, or community-based data systems.

Crucially, this tool is not meant to replace situated decision-making or cultural protocols. Rather, it offers a structured way to reflect on whether those protocols are being upheld, and whether researchers and institutions are living up to their commitments. It invites a shift in orientation and perspective by pushing us to ask whether a project was just, instead of asking if it was innovative; from asking whether a system worked, to asking whom it served and who shaped its design.

As the field of information science continues to expand its reach into communities, infrastructures, and systems of governance, this tool offers a practical way to stay grounded in the ethical and political stakes of research. It asks researchers not only to participate, but to be accountable. Not only to include communities, but to respect and uphold their rights. In doing so, it supports the kind of knowledge production that this dissertation has argued for all along: collaborative, reflexive, and in service of Indigenous futures.

5.9 Closing: What This Work Reveals

This chapter examined the findings of this dissertation through a dual analytical lens:

Participatory Action Research (PAR) and the Human Rights-Based Approach (HRBA).

Together, these frameworks have illuminated not only what occurred during the collaborative work in Vaupés, but how that work unfolded across intersecting domains of power, institutional structure, and community agency.

At the core of this study is a simple but urgent proposition: that research, particularly in fields like information science, must be accountable to the people and places it engages.

The work in Vaupés revealed that when Indigenous authorities, NGOs, and academic institutions come together with shared commitments to self-determination, cultural integrity, and relational accountability, collaboration can serve as a vehicle for both knowledge co-creation and social transformation. But this same work also exposed the fragility of such commitments in the face of structural constraints, limited funding, institutional turnover, and mismatched timelines.

Several insights emerge clearly. First, participation is not simply a matter of inclusion; it is a question of governance. Who sets the agenda, who facilitates the process, and who holds responsibility for follow-through are questions that define whether a project enacts or undermines rights. Second, power is not eradicated by good intentions. It must be negotiated constantly, through transparency, feedback, and shared decision-making. Third, institutions whether academic, non-governmental, or governmental, must recognize their roles not only as collaborators but as historical actors in systems of inequality. To contribute ethically, they must adapt to community-defined processes, not the other way around.

Methodologically, the use of PAR and HRBA together allowed for a fuller accounting of both the relationships and the rights at stake in relation to the work being conducted. PAR helped reveal the dynamics of facilitation, reflection, and participation as they were lived. HRBA offered a standard against which those dynamics could be evaluated, showing where rights to cultural preservation, participation, and consent were enacted. Neither framework alone would have surfaced those dynamics as described within this study. Their

combination made visible not only how knowledge was produced, but how it was shared, governed, challenged, and made meaningful in alignment with community priorities.

This chapter is not a conclusion, but a threshold. It does not close the inquiry but prepares the ground for the final chapter. Chapter 6 will return to the broader significance of this work: what it means for the future of information science, for researchers engaged in collaborative practice, and for institutions committed to equity but still structured by exclusion. It will offer final reflections, identify directions for future research, and call for a deeper transformation in how we imagine and enact the role of research in building just futures.

Chapter 6. Conclusion: Research as Responsibility

Final Reflections, Future Directions, and Continuing the Journey Together

6.1 Returning to the Journey

This dissertation began with a question rooted not only in academic inquiry, but in lived experience: How can collaborative information-science projects between Indigenous communities, NGOs, and academic institutions support knowledge co-creation, challenge extractive research practices, and advance community-defined development goals? This question was not abstract. It emerged from long-term engagements in Chiapas, Sucusari, and Vaupés, where information technologies, participatory methods, and institutional structures all intersected with deeply held cultural values, territorial governance, and Indigenous rights.

Each chapter of this dissertation contributed to that inquiry by building a layered, interdisciplinary, and grounded narrative. Chapter 1 introduced the motivations for the study and its roots in cross-border partnerships. Chapter 2 situated the work within three intersecting frameworks: Participatory Action Research (PAR), the Human Rights-Based Approach (HRBA), and settler colonial studies, and arguing that information science must be accountable not only to innovation but to justice. Chapter 3 detailed the methodological architecture of the Vaupés case, illuminating how tools like Photostories, serious gameplay, and participatory mapping were used to foster community-led development. Chapter 4 offered a thematic analysis of the project's implementation and outcomes, examining power, representation, governance, and institutional dynamics. Chapter 5 synthesized

those insights through the dual lens of PAR and HRBA, offering a critical reflection on what this research revealed.

But this was never just a research project. It was a process of collaboration, learning, and negotiation shaped by real relationships, evolving contexts, and the political stakes of knowledge production. It was shaped by the limitations of institutional structures and funding timelines, by the power imbalances between global universities and remote Indigenous territories, and by the enduring resilience of communities who continue to defend their languages, lands, and futures in the face of extractive development.

As the dissertation reaches its final chapter, this section does not mark an end rather it is a return to the questions that guided this work, to the voices that grounded it, and to the possibilities it helps illuminate. What follows is a synthesis of the intellectual, methodological, and ethical contributions of this study, not as a closure, but as a call forward.

6.2 What This Research Contributes

This dissertation offers contributions across four interconnected domains: substantive documentation, methodological innovation, theoretical framing, and disciplinary intervention. Together, these contributions respond to the urgent need for research that is not only ethical in intention but grounded in accountability, co-governance, and community-defined relevance.

Substantive Contributions

This work detailed an empirically rich account of a participatory initiative in Vaupés, Colombia, co-developed with Indigenous organizations ASATIQ and ASATRIZY, and implemented through a diplomado in partnership with Wildlife Works, Fundación Colombia Multicolor, UNAD, and the University of Washington. Through the documentation of participatory methods such as Photostories, Mayuk, participatory mapping, thematic dialogues, and planning tools, this study highlights how information systems can be designed, used, and governed by Indigenous communities themselves. The comparative reflections from prior work in Chiapas and Sucusari further illuminate how long-term trust, cultural anchoring, and reflexive design shape the sustainability and relevance of such initiatives.

Methodological Contributions

A central methodological contribution of this dissertation is the development of a dual-lens evaluative approach that brings together Participatory Action Research (PAR) and the Human Rights-Based Approach (HRBA). While PAR foregrounds relational accountability, reflexivity, and co-production of knowledge, HRBA introduces structured evaluative criteria based on international human rights principles, particularly the rights of Indigenous peoples. Used together, these frameworks allow for a layered analysis that assesses not only participation and process, but the enactment of rights such as free, prior, and informed consent; cultural integrity; gender equity; and self-determination. The resulting framework offers a tool for evaluating the ethics, depth, and sustainability of research partnerships in ways that extend beyond standard metrics or institutional reporting.

Theoretical Contributions

This study reframes how participatory research and information science can be evaluated and thus, shifting the unit of analysis from outputs and technologies to collaborative dynamics, governance structures, and relational accountability. It challenges the presumption that participatory processes are inherently equitable, instead offering tools for assessing how power circulates, how rights are enacted or deferred, and how institutions participate in settler colonial dynamics even when claiming allyship. In doing so, the dissertation extends both PAR and HRBA by placing them in dialogue with each other and with the structural realities of collaborative research in Indigenous territories.

Disciplinary Contributions

For the field of information science, this research offers a critical intervention. It insists that information systems are not neutral infrastructures, but socio-technical assemblages shaped by histories of colonization, development agendas, and institutional power. It challenges the field to rethink dominant framings of “participation,” “access,” and “impact,” urging scholars and practitioners to integrate Indigenous rights frameworks and participatory ethics not only in project design but in the core values of the discipline. By situating information science within broader political and environmental struggles, and by foregrounding community voices and governance structures, this dissertation models what socially accountable, human rights-aligned research can look like.

Taken together, these contributions demonstrate that participatory, rights-based research in information science is both possible and necessary. It is not without complexity,

contradiction, or limitation, but it offers a pathway for transforming the field from within, in solidarity with those whose knowledges, territories, and futures are most at stake.

6.3 Limitations Revisited, with Purpose

Every research project is shaped not only by its intentions, but by its constraints. This dissertation has already acknowledged key limitations in Chapter 5: the temporal boundaries of the data collection period (2021–2023), the institutional transitions that reshaped partnerships after that period, the methodological variability inherent in geographically dispersed and community-led facilitation, and the representational limits of working with a subset of community voices in the Vaupés region. These limitations are not failures. They are the contours of what this study can responsibly claim and what it cannot. Yet limitations also point to deeper structural challenges that shape the landscape of participatory and rights-based research. The fact that the research team’s engagement ended in 2023 reflects not a lack of will, but the realities of funding cycles, institutional timelines, and the challenges of sustaining long-term academic collaboration across borders. The evolving relationship between UNAD and Fundación Colombia Multicolor likewise reflects the shifting roles of national institutions, NGOs, and community organizations, ecosystems that are far more dynamic than static models of “partnership” often suggest.

The participation of approximately one-hundred community members in the diplomado, while significant, still represents a cross-sectional snapshot of life in Vaupés. These participants brought diverse perspectives from multiple Indigenous nations, but their experiences cannot be assumed to represent all community priorities, concerns, or visions.

The project was designed to privilege collective processes and local leadership, but as with all research, it unfolded within limits of time, language, geography, and facilitation.

Methodologically, the tools deployed were intentionally chosen to support engagement across those limits. Still, some dynamics remained beyond the reach of these tools. For instance, long-term governance outcomes, intergenerational shifts in knowledge transmission, and the evolving political position of the Indigenous associations were outside the scope of this dissertation, though they remain critical to the broader trajectory of the REDD+ initiative in the region.

Epistemically, this work was conducted through a dialogic and participatory lens yet still presented in the format of a Western academic dissertation. The process of translating collaborative, oral, and visual knowledge into written chapters necessarily involved mediation and selection. This tension is unavoidable, but it is acknowledged here with humility. The goal was not to fix or finalize meaning, but to reflect honestly on what emerged in shared practice, and to cite and honor that knowledge wherever possible.

Finally, as a mestiza researcher situated within academic institutions in the Global North, I remain accountable to the power dynamics I occupy, even as I work to resist them. This project was shaped by long-term commitments and direct involvement, but also by institutional constraints, disciplinary expectations, and epistemological distance. Holding these contradictions openly is part of what ethical research requires, and this is not meant to resolve them, but rather, to navigate them with care.

These limitations are therefore not simply methodological, rather they are personal, structural, epistemic, and political. They are reminders of what it takes to do participatory

work well, and what systems must change to make that work more sustainable, just, and community-led in the future.

6.4 Future Directions

This dissertation has presented a situated account of participatory information science practice, grounded in the early stages of a long-term collaboration in Vaupés, Colombia. This work is intentionally incomplete, both in its empirical scope and in its theoretical reach, and as such it is not a final word but an invitation to continue, deepen, and reframe how participatory research is conceptualized, supported, and enacted in information science and related fields. As a result, several directions emerge from this work that remains unfinished and can be expanded on in future works.

First, there is a need for sustained research into the long-term trajectories of community-based information systems. While this study offers insight into the design and facilitation of participatory methods, the durability and governance of these systems over time, particularly and perhaps more urgently, under shifting institutional, environmental, and political pressures, deserve further study. Questions of community control, intergenerational maintenance, and technological adaptation cannot be answered within short project cycles, yet they are critical to the viability of participatory design within Indigenous contexts.

Second, the evaluative framework developed here can be extended and adapted across new settings. The combined use of Participatory Action Research (PAR) and the Human Rights-Based Approach (HRBA) offers a generative tool for assessing both the relational and rights-based dimensions of collaborative work. Future researchers might

apply this dual-lens model in urban contexts, in work with diasporic or Afro-descendant communities, or in projects focused on disability justice, environmental stewardship, or language revitalization. The framework's adaptability allows it to be reinterpreted across cultural and institutional contexts while preserving its commitment to equity, participation, and accountability.

Third, this research underscores the urgency of institutional change. Community-based research cannot be sustained by researchers alone. It requires institutions, whether it be universities, independent funders, or NGOs, to shift their expectations around timelines, outputs, and authorship. Future inquiry might explore how tenure policies, grantmaking criteria, and university–community partnership structures can be reimagined to support long-term, rights-aligned collaboration. New metrics are needed, not just to measure impact, but to evaluate ethical alignment, community leadership, and sustained reciprocity.

Fourth, this work has implications for pedagogy. The methods, tensions, and ethical commitments described in this dissertation can inform the development of teaching materials, field-based learning opportunities, and student training in participatory and rights-based research. Information science educators might draw on this work to design curricula that center collaboration, Indigenous knowledge, and the interrogation of power within research and design practice. Such pedagogical extensions would help institutionalize more just research cultures in future generations of scholars and practitioners.

Finally, the broader political context demands that this line of inquiry continue. As academic freedoms come under attack, as funding for public research is curtailed, and as

the rights of Indigenous peoples are contested or denied across the globe, it is not enough for participatory research to be innovative. It must also be resilient, reflexive, and resolute. Future research must not only adapt to institutional volatility but actively resist structures that undermine ethical practice and the rights of those most affected by research. The survival and flourishing of participatory information science will depend on this resistance. Future directions, then, are not just academic. they are political, institutional, and generational. They extend beyond the pages of this dissertation into classrooms, community meetings, policy debates, and collective decisions about what kind of research is worth doing, for whom, and under whose terms.

6.5 Carrying the Work Forward

This dissertation has traced a path through contested terrain. It began with a question about what research might become when it is grounded in the rights of Indigenous peoples and the principles of participatory ethics. It traveled through fieldwork and facilitation, through institutional collaboration and negotiation, and through a sustained engagement with two guiding frameworks: Participatory Action Research and the Human Rights-Based Approach. Along the way, it made a simple but urgent argument: that research, particularly within information science, must be accountable first and foremost to people and communities, to place, to history, and to future generations.

This final section does not offer a summary, rather it offers a charge:

To the field of information science: this work invites a reckoning with the social consequences of our disciplinary assumptions. When we speak of “design,” we must ask, who designs? When we evaluate “impact,” we must ask, whose lives are being impacted,

and by what metrics? When we imagine “innovation,” we must also consider what is being displaced, extracted, or erased in the name of progress. Information science cannot remain ethically neutral in the face of these questions. Its methodologies, curricula, and institutional affiliations must evolve to embrace human rights and participatory justice as core commitments and not as optional add-ons.

To researchers: this work asks us to move differently. It asks us to cultivate long-term relationships, to privilege process over product, and to name the power we carry when we enter communities. It insists that participatory work must not simply mirror the language of inclusion or by saying what can be boiled down to good intentions, rather it must embody the labor of accountability, it must be actionable and responsible. The dual-lens framework developed here offers one approach, one set of tools. But more importantly, it models a posture of humility, of shared authorship, and of principled resistance to extractive norms.

To institutions and funders: this work demands structural change. Ethical, community-led research requires more than good intentions. It requires flexible timelines, support for multilingual and analog methods, and a redefinition of what counts as rigorous, impactful, or fundable. Institutions cannot claim to support equity while reinforcing systems that marginalize Indigenous knowledge or relegate participatory work to the periphery. They must transform, not only how they evaluate research, but how they resource, reward, and remain accountable to it.

To Indigenous communities and collaborators: this work would not exist without you. It was shaped in dialogue and collective reflection, and while it does not claim to fully represent you, it does aim to honor the knowledge you shared and the conditions you set.

Its future iterations, whether in classrooms, policy reports, or field-based projects, it will remain grounded in the principles of consent, reciprocity, and relational accountability that you made non-negotiable.

While this dissertation cannot offer closure, it does acknowledge the work ahead: to adapt these frameworks in new settings, to deepen institutional commitments, and to push participatory research into bolder, more just, more transformative forms. It also names what this work has cost: time, uncertainty, institutional risk, and the emotional weight of working across worlds that are often misaligned. But it affirms, with clarity, that this labor is necessary. In a moment marked by shrinking academic freedoms, environmental urgency, and global assaults on Indigenous rights, research must not retreat, it must resist, and it must push back. This is the work of reimagining research as a relational, political, and collective practice. It is unfinished by design, and so it must continue.

References

- Aguilar, L. (2025, July 25). *Ecuador Axes its Environment Ministry, Paving Way for Unchecked Extraction on Indigenous Lands and in Biodiverse Forests*. Amazon Frontlines.
<https://amazonfrontlines.org/chronicles/ecuador-axes-its-environment-ministry-putting-biodiversity-indigenous-territories-and-the-climate-at-risk/>
- Aikhenvald, A. Y. (2022). The Amazon basin: Linguistic areas and language contact. In *The Cambridge Handbook of Language Contact* (pp. 232–260). Cambridge University Press.
- ASATIQ, Colombia. (n.d.). Wildlife Works. Retrieved May 16, 2024, from
<https://www.wildlifeworks.com/asatiq>
- ASATRIZY, Colombia. (n.d.). Wildlife Works. Retrieved May 16, 2024, from
<https://www.wildlifeworks.com/asatrizy>
- Becvar, K., & Srinivasan, R. (2009). Indigenous Knowledge and Culturally Responsive Methods in Information Research. *The Library Quarterly*, 79(4), 421–441.
- Blackwell, M. (2012). The Practice of Autonomy in the Age of Neoliberalism: Strategies from Indigenous Women’s Organising in Mexico. *Journal of Latin American Studies*, 44(4), 703–732.
- Blackwell, M. (2017). Geographies of indigeneity: Indigenous migrant women’s organizing and translocal politics of place. *Latino Studies*, 15(2), 156–181.
- Callison, C., Roy, L., & LeCheminant, G. A. (2016). *Indigenous Notions of Ownership and Libraries, Archives and Museums*. Walter de Gruyter GmbH & Co KG.

- Charters, C., & Stavenhagen, R. (2009). *Making the Declaration work : the United Nations Declaration on the Rights of Indigenous Peoples*. IWGIA ; Distributors Transaction Publisher [and] Central Books.
- Cochran, P. A. L., Marshall, C. A., Garcia-Downing, C., Kendall, E., Cook, D., McCubbin, L., & Gover, R. M. S. (2008). Indigenous Ways of Knowing: Implications for Participatory Research and Community. *American Journal of Public Health*, 98(1), 22–27.
- DANE. (2023). <https://www.dane.gov.co/>
- Díaz, D., & Collins, J. (2025, July 17). *Indigenous Communities in Putumayo Mount Resistance against Canadian Oil*. North American Congress on Latin America (NACLA). <https://nacla.org/indigenous-communities-in-putumayo-mount-resistance-against-canadian-oil/>
- Duarte, M. E., & Belarde-Lewis, M. (2015). Imagining: Creating Spaces for Indigenous Ontologies. *Cataloging & Classification Quarterly*, 53(5–6), 677–702.
- Fals-Borda, O. (1987). The application of participatory action-research in Latin America. *International Sociology: Journal of the International Sociological Association*, 2(4), 329–347.
- Fricker, M. (2007). Testimonial Injustice. In *Epistemic Injustice* (pp. 9–29). Oxford University Press.
- Frontlines, A. (2025, July 3). *Organizations Warn that Ecuador's Proposed Protected Areas Law Ignores Indigenous Peoples and Promotes Privatization*. Amazon Frontlines. <https://amazonfrontlines.org/chronicles/organizations-warn-that-ecuadors-proposed-protected-areas-law-ignores-indigenous-peoples-and-promotes-privatization/>

- Gavazzo, N., Espina, R., Arango, C., González, S., & Canuto, D. (2018). El diálogo de saberes como estrategia metodológica para la articulación de investigación y extensión. *UNSAM Edita, Papeles de Trabajo*, 55–71.
- Gilmore, M. P., & Young, J. C. (2010). The Maijuna participatory mapping project: mapping the past and the present for the future. *Perú: Maijuna, Rapid Biological and Social Inventories Report*, 22, 233–242.
- Gilmore, M. P., & Young, J. C. (2012). The Use of Participatory Mapping in Ethnobiological Research, Biocultural Conservation, and Community Empowerment: A Case Study From the Peruvian Amazon. *Journal of Ethnobiology*, 32(1), 6–29.
- Giovannini, M. (2016). Alternatives to Development: The Contribution of Indigenous Community Enterprises in Chiapas. *Journal of International Development*, 28(7), 1138–1154.
- Global Forest Watch. (2024). Vaupés, Colombia Deforestation Rates & Statistics. <https://gfw.global/4mjUXYN>
- Gomez, R. (2024). *Photostories: Applications of a participatory photography methodology for social science research*. Ethics International Press.
- Gómez, R., & Beltrán, M. (Eds.). (2021). *Ríos que Convergen: Sistematización de Experiencias del Diplomado "Liderazgo, Comunicación y Cambio Climático", Vaupés, Colombia*. Fundación Colombia Multicolor y Universidad de Washington, Bogotá y Seattle, WA. <https://bit.ly/Diplomado-metodologias>
- Gomez, R., Beltran, M., Iribe Ramirez, Y., Morales, I., Rincon, C., & Grismaldo, A. M. (2024). Participatory methods for indigenous community planning and development in the Colombian Amazon. *Information Technology for Development*, 1–19.

- Gomez, R., & Gould, E. (2010). The “cool factor” of public access to ICT: Users’ perceptions of trust in libraries, telecentres and cybercafés in developing countries. *Information Technology & People*, 23(3), 247–264.
- Gomez, R., Iribe Ramirez, Y., & Berwick, J. (2018). Radio, library, and storytelling: Building an information system for indigenous community development in Chiapas, Mexico. *The Electronic Journal of Information Systems in Developing Countries*, 2010, e12062.
- Gomez, R., & Vannini, S. (2017). Notions of Home and Sense of Belonging in the Context of Migration in a Journey through Participatory Photography. *The Electronic Journal of Information Systems in Developing Countries*, 78(1), 1–46.
- Gomez, R., Zubair, C., Berwick, J., & Morales, M. (2017). *Living Fully – Vivir Plenamente – Lekil Cuxlejalil: Lekil Cuxlejalil among Tseltal Mayan Communities in Chiapas – Lekil Cuxlejalil en las comunidades Tseltal Maya en Chiapas*. One Equal Heart Foundation.
- González Zepeda, Luz Elena, Martínez Pinto, Cristina Elena. (2023). *Inteligencia artificial centrada en los pueblos indígenas: perspectivas desde América Latina y el Caribe*. UNESCO Office Montevideo and Regional Bureau for Science in Latin America and the Caribbean. <https://unesdoc.unesco.org/ark:/48223/pf0000387814>
- Gott, R. (2007). Latin America as a White Settler Society. *Bulletin of Latin American Research*, 26(2), 269–289.
- Harris, R. L., Robles, W., Nef, J., Galafassi, G. P., Hellman, J. A., Kay, C., Kearney, M. G., Miller, F., Nef, J., & Patroni, V. (2008). *Capital, Power, and Inequality in Latin America and the Caribbean*. Rowman & Littlefield Publishers, Incorporated.
- Harris, R. W. (2016). How ICT4D Research Fails the Poor. *Information Technology for Development*, 22(1), 177–192.

- Hawk, M. T. (2017). Native organizing before the non-profit industrial complex. In *The Revolution Will Not Be Funded* (pp. 101–106). Duke University Press.
- King, T. L., & Osayande, E. (2017). The filth on philanthropy: Progressive philanthropy's agenda to misdirect social justice movements. In *The Revolution Will Not Be Funded* (pp. 79–90). Duke University Press.
- Kukutai, T., & Taylor, J. (2016). *Indigenous data sovereignty: Toward an agenda* (T. Kukutai & J. Taylor, Eds.). ANU Press.
- Lopes de Oliveira, D., & Lewenstein, B. V. (2023). Supporting Activism in Latin America: The Role of Science Communication, Science Journalism, and NGOs in Socio-environmental Conflicts. *Journalism Studies*, 1–17.
- Lozano Flores, L., Delgado Pugley, D., Casas Luna, S., Van den Broeck, P., & Parra, C. (2024). Challenging state authority and hierarchical power: A case study of the engagement of Peru's Amazonian Indigenous Peoples' organizations in the governance of REDD+. *Environmental Policy and Governance*, 34(2), 137–151.
- Maurer, E. (1984). *Los tseltales*. Centro de Estudios Educativos.
- McCune, N., & Sánchez, M. (2019). Teaching the territory: agroecological pedagogy and popular movements. *Agriculture and Human Values*, 36(3), 595–610.
- McIntyre, A. (2007). *Participatory Action Research*. SAGE Publications.
- Mignolo, W. D. (2007). DELINKING: The rhetoric of modernity, the logic of coloniality and the grammar of de-coloniality. *Cultural Studies*, 21(2–3), 449–514.
- MinTIC. (2024). MINTIC Colombia. <https://www.mintic.gov.co/portal/715/w3-channel.html>

- Muller, M. J. (2003). Participatory design: the third space in HCI. *Human-Computer Interaction: Development Process*, 4235, 165–185.
- Nakata, M., Byrne, A., Nakata, V., & Gardiner, G. (2005). Indigenous Knowledge, the Library and Information Service Sector, and Protocols. *Australian Academic & Research Libraries*, 36(2), 7–21.
- Pérez, C., & Echeverri, J. Á. (Eds.). (2010). *Memorias: primer encuentro amazónico de experiencias de diálogo de saberes*. Editorial Universidad Nacional de Colombia Sede Amazonia.
- Quijano, A. (2024). Coloniality of Power, Eurocentrism, and Latin America. In W. D. Mignolo, R. Segato, & C. E. Walsh (Eds.), *Aníbal Quijano: Foundational Essays on the Coloniality of Power*. Duke University Press.
- Reyes, A., & Kaufman, M. (2011). Sovereignty, Indigeneity, Territory: Zapatista Autonomy and the New Practices of Decolonization. *The South Atlantic Quarterly*, 110(2), 505–525.
- Rodríguez-de-Francisco, J. C., del Cairo, C., Ortiz-Gallego, D., Velez-Triana, J. S., Vergara-Gutiérrez, T., & Hein, J. (2021). Post-conflict transition and REDD+ in Colombia: Challenges to reducing deforestation in the Amazon. *Forest Policy and Economics*, 127(102450), 102450.
- Runde, D. F., Bandura, R., & Mckeown, S. (n.d.). *Sustainable infrastructure in the Amazon*. Center for Strategic and International Studies (CSIS).
<https://www.jstor.org/stable/resrep27030.7>
- Schroeder, H., & González, N. C. (2019). Bridging knowledge divides: The case of indigenous ontologies of territoriality and REDD+. *Forest Policy and Economics*, 100, 198–206.

- Smith, A. (2017). Introduction: The revolution will not be funded. In *The Revolution Will Not Be Funded* (pp. 1–18). Duke University Press.
- Smith, D. E. (2016). Governing data and data for governance: the everyday practice of Indigenous sovereignty. *Indigenous Data Sovereignty: Toward an Agenda*.
<https://doi.org/10.22459/CAEPR38.11.2016.07>
- Smith, L. T. (2012). *Decolonizing Methodologies : Research and Indigenous Peoples*. Zed Books.
- Speed, S. (2008a). *Rights in rebellion : indigenous struggle and human rights in Chiapas*. Stanford, Calif. : Stanford University Press.
- Speed, S. (2008b). Forged in Dialogue Toward a Critically Engaged Activist Research. In C. R. Hale (Ed.), *Engaging Contradictions : Theory, Politics, and Methods of Activist Scholarship* (pp. 213–236). University of California Press.
- Speed, S. (2017). Structures of Settler Capitalism in Abya Yala. In *American Quarterly* (Vol. 69, Issue 4, pp. 783–790). <https://doi.org/10.1353/aq.2017.0064>
- Taylor, L., & Lublin, G. (2021). Settler colonial studies and Latin America. *Settler Colonial Studies*, 11(3), 259–270.
- United Nations. (2008). *United Nations declaration on the rights of indigenous peoples* (Pocket sized format.). Geneva : Office of the High Commissioner for Human Rights.
- Veracini, L. (2011). Introducing: settler colonial studies. *Settler Colonial Studies*, 1(1), 1–12.
- von der Porten, S., de Loë, R., & Plummer, R. (2015). Research article: Collaborative environmental governance and indigenous peoples: Recommendations for practice. *Environmental Practice: Journal of the National Association of Environmental Professionals*, 17(2), 134–144.

What is REDD+? (n.d.). <https://unfccc.int/topics/land-use/workstreams/redd/what-is-redd>

Wilson, S. (2008). *Research is ceremony: Indigenous research methods*. Fernwood Publishing.

Wingfield, A., & Gilmore, M. P. (2021). Along the Sucusari River. *Places Journal*.
<https://placesjournal.org/article/a-journey-with-indigenous-leaders-in-the-peruvian-amazon/>

Wolfe, P. (2006). Settler colonialism and the elimination of the native. In *Journal of Genocide Research* (Vol. 8, Issue 4, pp. 387–409).
<https://doi.org/10.1080/14623520601056240>

Yefimova, K., Neils, M., Newell, B. C., & Gomez, R. (2014). Fotohistorias: Participatory Photography as a Methodology to Elicit the Life Experiences of Migrants. *Proceedings of the 48th Hawaii International Conference on System Sciences (HICSS-48)*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2482520

Youdelis, M., Townsend, J., Bhattacharyya, J., Moola, F., & Fobister, J. B. (2021). Decolonial conservation: establishing Indigenous Protected Areas for future generations in the face of extractive capitalism. *Journal of Political Ecology*, 28(1).
<https://doi.org/10.2458/jpe.4716>