



DEPARTMENT OF POLITICAL SCIENCE

FROM SEEDS TO ASSEMBLIES. AGROECOLOGY AS A TOOL FOR POLITICAL PARTICIPATION

A Case Study on Q'eqchi' Mayan Peasant Women
in Zona Reina, Guatemala

Iraide Arcos Fabrega

Master's Thesis: 30 credits

Programme: Master's Programme in Political Science: Environmental Governance and Behavior

Date: 26th May, 2025

Supervisor: Stephen Dawson

Words: 15.978

ABSTRACT

Indigenous women's political participation remains limited due to intersecting inequalities. Nevertheless, sustainable initiatives such as agroecology have proved to empower communities and promote social engagement. This research investigates the political dimension of agroecology by examining how it can affect Indigenous women's political participation. Social Capital Theory and Empowerment Theory are used to identify the mechanisms through which agroecology fosters such participation investigating the case of Q'eqchi' women in Zona Reina, Guatemala. Using a qualitative case study approach with ethnographic participatory methods and semi-structured interviews, mechanisms from both theories are identified. Capabilities, resources, bonding and bridging social capital and ancestral knowledge have been shown to have a big influence in expanding social capital and empowering participants, which has a positive impact on political participation despite the presence of some barriers. The findings provide a guideline for institutions and communities to start similar initiatives in other parts of the world. Future research should replicate this study in other contexts to identify whether the mechanisms are context-dependent and analyse the time dimension of the effects.

Keywords: Agroecology, Indigenous Women, Political Participation, Social Capital, Empowerment.

ACKNOWLEDGMENTS

Foremost, I would like to thank all the incredible women I have met in Zona Reina, your stories are clear examples of resistance and resilience. Thank you for trusting and sharing them with me, for your honesty, implication and especially for your hospitality. You have truly been an inspiration to me; this research would not exist without your voices and strength.

I would also like to express my gratitude to Stephen Dawson, for guiding me throughout this process, and for your encouragement and advice in every stage. Your support made this project not only possible but also deeply enriching. I am also grateful to the Swedish International Centre for Local Democracy (ICLD) for trusting in this project and making it possible to carry out Fieldwork in Guatemala.

Special thanks go to PROIDE and PRODESSA for all the logistic support, the time invested and your hospitality. Thank you Oleguer for supporting this project and contacting PRODESSA. Thank you Hno. Francisco Perez for accompanying me during my stay including me in your family and providing all the necessary support, I felt at home; Sheyla for your amazing and smooth coordination, I value your time as gold.

Thank you to the Zona Reina Team for including me as one more, and for showing me part of this wonderful country that is Guatemala, its culture and values. For teaching me so much about the Mayan culture and Q'eqchi Community. For making spaces in your busy agendas to accompany me and for making my time in Zona Reina unforgettable. B'antiox Bioni, Fernando, Olga, Cesar, Dina, Álvaro ut Marvin. Wan Chik!

To my classmates and friends from the programme: thank you for the inspiration and laughter during these intense months of study. Learning alongside you has been a privilege: to the Haga people, the Girlie Girls and Lu and Xoxo.

Finally, I want to thank my family Pepe y Toñi, and my partner Goiko: Your unconditional support, love, and patience have sustained me during these months. It has been an intense experience for you as well, this work is for you, too.

ABBREVIATIONS LIST:

AEP: Agroecology Project

COCODE: Consejo Comunitarios de Desarrollo

DCA: Deliberative Community Assemblies

ET: Empowerment Theory

PRODESSA: Proyecto de Desarrollo Santiago

SCT: Social Capital Theory

SC: Social Capital

TABLE OF CONTENT

ABBREVIATIONS LIST	4
1. INTRODUCTION	6
2. LITERATURE REVIEW	10
2.1. Overview of Political Participation	10
2.2. Inequalities and Political Participation.....	11
2.3. Agroecology and Social Engagement.....	13
3. THEORETICAL FRAMEWORK.....	17
3.1. Social Capital Theory	17
3.2. Empowerment Theory	19
4. RESEARCH DESIGN	23
4.1. Case Selection.....	23
4.2. Data-Gathering Methods.....	26
4.2.1. Learning from the field. Adapting methods in context.....	26
4.2.2. Ethnography	27
4.2.3. Semi-structured Interviews.....	29
4.3. Analysis Approach.....	31
4.4. Ethical Considerations	32
5. RESULTS AND DISCUSSION.....	35
5.1. Mechanisms.....	35
5.1.1. Capabilities.....	35
5.1.2. Resources	37
5.1.3. Bonding and Cognitive SC.....	39

5.1.4.	Bridging SC.....	41
5.1.5.	New Mechanisms.....	42
5.2.	Barriers	43
5.3.	From mechanisms to participation. Findings from drawings	43
6.	CONCLUSION.....	46
7.	REFERENCES.....	49
8.	APPENDIX.....	55

1. INTRODUCTION

While Indigenous women play a central role in the management of natural resources and the support of community life, they often remain one of the most excluded groups from decision-making spaces. Their political participation is still limited by both the structural discrimination that affects Indigenous peoples and gender inequalities that intersect in their lives¹. This double marginalisation not only restricts their access to resources but also silences their voices in institutions (Lwamba et al., 2022). Furthermore, most Indigenous communities directly depend culturally, economically and spiritually on the natural resources of their land. This fact results in them being severely affected by increasingly recurrent climatic disasters which adds to a scenario of historical inequalities (Ford, 2012; Norton-Smith et al., 2016). Prolonged droughts, land degradation and loss of biodiversity are challenges now faced by many indigenous peoples due to climate change. The situation of exclusion reinforces Indigenous women's vulnerability to the impacts of such phenomena and suppresses their potential as key adaptation and transformation agents.

Nonetheless, political participation is usually the main tool for communities and citizens to express their needs and acquire resources from the state. It facilitates adaptation to changes by enabling the transmission of citizens' concerns to institutions and spheres of power. In some contexts where population groups have historically been deprived of political participation, initiatives are emerging that can help to break down these barriers by empowering communities while being resilient to the environment and respecting traditional practices (Schlingmann et al., 2021). One example of such initiatives can be agroecology (Altieri et al., 2015). Hence, this research aims to investigate how sustainable practices such as Agroecology Projects (AEP) have the potential to influence the political participation of Indigenous women through different mechanisms. Such mechanisms are related to the generation of Social Capital (SC), which is based on the benefits of social interaction, and individual empowerment. To do so, the case of AEP in Zona Reina, Guatemala, that focus on the involvement of Mayan-Q'eqchi' women to promote food sovereignty, is explored.

¹ See "Indigenous Peoples and Ethnic Minorities: Marginalization Is the Norm" (2018)

To add some background to the case context, exclusion from politics is the reality of many indigenous communities in Latin America, specifically in Guatemala. This Central American country is home to 24 ethnic groups, 22 of which have Mayan origins and represent more than 40% of the total population in Guatemala.² Although they are more than a third of the population, Guatemala's indigenous peoples have historically faced discrimination, inequality and exclusion, which has limited the full recognition of their rights and perpetuated conditions of structural poverty. Even nowadays, 79,2% of the Indigenous population lives in poverty, while this percentage drops to 46,6% among the non-Indigenous population.³ Additionally, these structural inequalities are aggravated in the case of women, who face high levels of violence: In 2024 more than 10.000 sexual assaults were reported and 52.996 births among girls and teenagers aged between 10 and 19 were registered.⁴ Moreover, 90% of adult Indigenous women were illiterate by the beginning of the 21st century,⁵ reflecting a persistent lack of access to basic rights such as education.

Yet, some initiatives promoted by local stakeholders, like NGOs, seek to reverse this situation of poverty by using sustainable tools which are resilient to lands and their people, such as agroecology. In general terms, agroecology is an interdisciplinary practice that integrates ecological, social, cultural and economic principles in the management of sustainable agricultural systems. Beyond a production technique, it is conceived as an alternative model to current the agro-industrial system. As Gliessman (2018) argues, agroecology must be understood as a science, as a practice but also as a social movement. Therefore, it must promote food sovereignty, respect for the ancestral practices of peasants and indigenous people, and ecological resilience. It seeks to transform both agricultural practices and power relations in food systems, with an emphasis on equity, community participation and sustainability.

In fact, AEPs are becoming increasingly popular in Guatemala, similarly in other parts of Latin America and the Global South. Moreover, it has been proven that they not only foster food sovereignty in poor rural areas but can also contribute to the economic and social

² Data from 2023 according to “The Indigenous World 2024: Guatemala. (2024). *IWGLIA*”

³ Encuesta Nacional de Condiciones de Vida. (2014). In *ENCONVI*.

⁴ Boletina Centroamericana De Violencia 3. (2024). In ORMUSA.

⁵ Encuesta Nacional de Condiciones de Vida. (2006). *ENCONVI*.

emancipation of communities where they are practised (Altieri and Toledo, 2011; Kansanga et al. 2020; Pérez-Vitoria, 2005). In some cases, research also shows that when agroecology is practised by women, it also challenges traditional gender roles and they become empowered within the communities (Behl et al., 2023; Rosset et al., 2011; Zaremba et al., 2021).

Nevertheless, this research aims to explore the political dimension of the issue by analysing which elements of these projects can encourage political participation. The focus is particularly on those projects targeting Indigenous women to identify the mechanisms that can encourage their political participation and increase their representation in institutions. To address this issue, the following research question is posed:

RQ: How can agroecology projects influence Indigenous women's political participation?

To answer this research, question a case study on the Zona Reina region, in the Quiché department of Guatemala, will be conducted. Indigenous communities in this region, mostly Q'eqchi', are deeply marked by historical processes, such as Spanish colonisation, an agricultural reform in the 1960s and the Civil Conflict of Guatemala (1960-1996). All these events resulted in scenarios of extreme violence, expropriation of resources and displacements of entire Q'eqchi' communities. As a result, nowadays Zona Reina is one of the most impoverished areas in Guatemala, the extensive monoculture system benefits large companies, thereby marginalising indigenous communities by restricting their control over land. In response to this, NGOs such as PRODESSA⁶ promote projects to restore ancestral practices and consolidate food sovereignty. Currently, they are working on three AEPs targeting women from the Q'eqchi' community in more than 15 aldeas⁷. Workshops on traditional farming methods, solidarity economy and prevention of violence against women are the initiatives that build up PRODESSA's integral AEP.

This research thus explores how AEPs influence political participation in a context characterised by historical gender and ethnicity inequalities. The study values participants' voices and knowledge, offering an environmental justice and empowerment perspective: By

⁶ Guatemalan NGO founded 36 years ago that has projects in 6 different departments and has assisted over 500 indigenous communities. Composed entirely of Guatemalan employees, it aims to support community development and education projects. See more in (*Nosotros – PRODESSA*, n.d.)

⁷ Aldea: Territorial organisation at the local level in Zona Reina. Equivalent to *village* in English.

recovering ancestral agricultural practices, Indigenous women not only promote food sovereignty and climate resilience but also challenge traditional structures of exclusion. Moreover, its relevance transcends the local level, as the findings can serve as a reference for similar initiatives in other territories and contribute to driving transformations towards more just, egalitarian and sustainable societies, promoting gender equity, social inclusion and care for the environment.

The research consists of a qualitative case study which adopts the following structure: First, previous literature on political participation and inequalities, and agroecology and social engagement is reviewed to identify the research gap that motivates this study. Subsequently, the theoretical framework is presented including elements from Social Capital Theory (SCT) and Empowerment Theory (ET) in a complementary way to identify potential mechanisms from both theories that can influence women's informal political but also in Deliberative Community Assemblies (DCA) which is the main local governance structure in Zona Reina. Next, the research design is presented, including the presentation and background of the selected case, the methods employed, the analysis approach and the ethical considerations. More specifically, the methods used for this research are semi-structured interviews and ethnography based on visual data: photography elicitation and a drawing workshop. Then, the results are presented and critically discussed, including space for insights that add up to existing theory and literature. Finally, the conclusion is posed, including the study's implications, limitations, and suggestions for future research.

2. LITERATURE REVIEW

2.1. Overview of Political Participation

The concept of political participation has been assessed by several scholars within the field of political science since the decade of the 1960s. Definitions until the date range from narrow conceptualizations that refer exclusively to voting or holding political office, to broader definitions that consider a wide dimension of daily actions. In this following section, its conceptualisation is reviewed to generate a comprehensive definition aligned with the purpose of this research, specifically adjusted to the local level participation.

Traditionally, political participation has been conceptualised as a set of activities strictly oriented towards influencing government decisions, usually through formal institutions such as voting, contacting representatives or practising party militancy. As Verba et al. (1978) state, participation refers to legal activities that citizens use with the specific aim of influencing the selection of representatives and the policies they intend to implement. In their broadest definition, Verba et al. (1995) suggest that while voting is the most recognised mechanism for political participation, other actions such as engaging with political figures or joining political parties are equally important than voting. Along the same line, Millbrath and Goel (1997) and Norris (2002) define formal political participation as legal actions recognised in the formal political system such as voting, attending political meetings, joining parties or participating in electoral campaigns. Dahl (1989) argues that all these elements are pillars for formal participation in a democracy and it is central to the citizens' influence towards politics.

Yet, a growing body of literature argues that political participation should not be limited to formal participation, but that there are informal, everyday life and unconventional practices that can be considered as political participation. Thus, citizen participation may include all those practices that show citizen agency and contribute indirectly to decision-making processes (Van Deth, 2014; Hooghe et al., 2014). For instance, scholars like Bennett (1998) examine the transformation of political engagement finding that individuals express their political identity through everyday decisions about consumption, cultural practices, social affiliations, etc. He refers to this term as 'lifestyle politics' and argues that the importance of

considering such acts as political participation stems from the fact that society is increasingly individualised and refuses traditional models of participation that require collectivisation and engagement with the political system. Nevertheless, these everyday acts must be recognised as political participation because they influence public debate and electoral outcomes in a certain way. Ignoring such elements would mean missing a great explanation of contemporary political behaviour.

More specifically when focusing on local governance, politics often influence many aspects of citizens' daily lives, and therefore the traditional definition of formal political participation may be limited. According to Cornwall (2008), the formal and informal institutions intertwine at the local level. This means that political participation in local democracy cannot be defined simply by using formal mechanisms of participation such as voting or militancy. Indeed, in many local settings institutions are non-partisan, and even governance is practised through deliberative assemblies, neighbourhood networks or other mechanisms of self-management. These forms of participation allow local actors to influence public policies, manage common goods and respond to immediate needs within their own cultural and organisational structures (Ostrom, 1990; Baiocchi, 2005). For these reasons, considering some daily life acts as politics enables a better picture of what political participation means in the local context and especially in the setting of this case study.

2.2. Inequalities and Political Participation

While uniform political participation in society is important to ensure democratic quality and representation of all groups in society, there exist inequalities regarding the participation of certain social sectors. It is acknowledged in the literature that formal political participation requires not only the willingness to influence but also resources such as “time to attend meetings, money to donate, and civic skills to make one's voice heard” (Verba 1996:3). This suggests that economic and social inequalities might affect the participation of some groups in society. The assumption is pictured in Armingeon & Schädel's (2014) research on social inequalities and political participation where they analyse the election trends within the European context between 1956 and 2009. Their conclusion suggests that there is an increase in abstention among working classes and low-educated groups of society. This fact reinforces the argument that political participation goes beyond voting behaviour, but it also highlights

that there exist inequalities within democratic practices. Similarly, Stolle and Hooghe (2010) assess the issue and find out that when considering non-institutionalised forms of political participation, the gender and the age gap are reduced as these groups prefer to engage in politics via informal participation. Broadening the research focus to 25 countries across the globe, Marien et al. (2009) also found that non-institutional forms of participation reduce to a certain extent gender and age inequalities, but not education inequalities. However, they also argue that all types of participation have their drawbacks when it comes to including the population equally in the decision-making process.

More specifically on gender and participation, it has been found that despite significant progress in some countries, major inequalities persist in women's political participation and representation at a global scale. Paxton et al. (2007) address the barriers that women face when being politically active and conclude that gender socialisation, lack of female role models, unequal distribution of domestic work and other cultural and international aspects are the main factors that impede equal political participation between genders. Additionally, they acknowledge the limitation of the research when considering women as a homogeneous group, since race, religion, class and ethnicity are cleavages that divide women and the participation among these groups might vary as well. Although such literature identifies several structural and cultural factors that limit women's political participation in general terms (Paxton et al., 2007), it does not delve into specific contexts in several parts of the world, such as Latin America. This region is characterised as one of the most unequal in terms of socio-economic inequalities (Coffey et al., 2020). Moreover, it has a high ethnic diversity, including a large population of indigenous people. Thus, it is essential to broaden the focus of research on political participation and consider how intersectionality conditions women's forms of participation in a context marked by historical marginalisation.

Espinal and Zhao's (2015) research on gender segmentation in civic engagement and its influence on political participation found out there is a notable gender gap in civic associational activities. Their findings suggest that men are more involved than women in political activities and this might influence the degree of their participation. Desposato and Norrander (2008) also conclude there exists a gender gap in all kinds of participation in Latin America due to the "opportunity and belief" differences between genders, but also partly because of individual factors and contextual factors which are translated into smaller

participation of women in politics. In other words, intersectionality between gender and race/ethnicity might have a big role in explaining why in Latin American countries the political participation of marginalised groups is so limited. This fact also affects their interests since they lack political space to claim their needs. Fraser (1997) pictures this idea very clearly when she states that political exclusion is not only a matter of lack of economic resources but also the symbolic marginalisation of certain cultural groups. According to the scholar, democratic justice comes with both economic distribution and cultural acknowledgement.

2.3. *Agroecology and Social Engagement:*

One proposed way of increasing political participation in such contexts is civil engagement initiatives that involve community participation and cooperation of different groups. Environmental practices such as agroecology have been proven to be a great tool to create social capital (SC) and empowerment while protecting the environment by avoiding monoculture and extensive resource extractions (Altieri and Toledo, 2011; Behl et al., 2023; Kansanga et al., 2020; Rosset et al., 2011). Participatory agroecology is practiced in different countries. Kansanga et al. (2020) explore the case of Malawian agriculture and the implementation of farmer-to-farmer AEPs which align with traditional practices of local peasants. Using a quantitative approach, the researchers find that by participating in agroecology, households showed a significant improvement in their SC. They provide a framework that develops the role of SC and agroecology as a reinforcement for local communities.

Similar research has been conducted in Latin America where there has been an increase of small farmers that use traditional agricultural practices. This phenomenon named after “the return of the peasants” (Pérez-Vitoria, 2005) comes together with a big cultural and social component. Altieri and Toledo (2011) address how agroecology provides the basis to achieve food sovereignty which leads to energy sovereignty. These elements enable peasants to produce resources by sustainable practices, to satisfy most of their needs and to adapt to climate change. Furthermore, they find that already in some regions of Andes and Mexico the indigenous communities started to engage politically. However, this research lacks a gender perspective as the role of women in agroecology is not mentioned in the analysis.

Contrarily, Rosset et al. (2011) in their research on the farmer-to-farmer movement in Cuba, briefly assess gender roles in sustainable practices. They argue that agroecology practices can challenge gender roles in families since the means of production are not only owned by men but diversified across the members of the family. Therefore, women get to make production decisions and economic profit, a fact that can potentially lead them to participate more in decision-making processes. Still, the gender approach is not central in this research, but it is rather mentioned as an outcome of the agroecology initiatives.

All these previous articles analyse many of the social benefits that sustainable practices bring to local communities and they place the cultural preservation of ancestral practices at the centre. Yet there is a lack of perspective on the political activism that agroecology has the potential to play. However, in some Western countries, the effect of sustainable practices on political activism has been studied by some researchers. One example is Nettle et al.'s (2016) work on Australian urban-community gardens. In this research, they illustrate the picture of community gardens perceived as communal spaces where transformative work is performed. Additionally, they mention that such spaces have the potential to have a positive impact on political participation for various reasons: first, through innovation; second, through knowledge exchange; third, by promoting an alternative lifestyle non-dependent on the market and the formal institutions; fourth, by creating an "alternative political imaginary" and last, by informing policy debates. Thereafter, in community gardens, the space is used to enable social interaction within the context of sustainable development practices. These promote political narratives that challenge the current status quo regarding the economic and food system so it provides room to critically assess new ways to live. Similarly, Draper and Freedman (2010) analyse community urban gardens across the US and find that such spaces can become a tool to create small-scale political organisation since organisational roles are developed and it gives room to individuals to cooperate and actively participate in the decisions made within the gardens. In a way, these articles analyse the skills that individuals can develop by participating in community gardening that potentially enable political participation. Nevertheless, the scope is very narrowed to urban contexts in Western countries so the results might differ in other contexts.

On women's empowerment within sustainable practices, Zaremba et al. (2021) theoretically review the 13 principles of agroecology from a feminist approach. They stress the importance

of introducing a gender approach to understand sustainable practices if a socially fair ecological transition that follows the principles of equity is to be achieved. In this paper, the authors highlight equity, land and natural resource governance and participation that agroecology integrates as essential elements to promote women's empowerment. In terms of equity, feminist agroecology seeks to combat structural gender inequalities. They argue that to constitute an egalitarian system, both productive and reproductive work must be visible and equal, so including women in the current productive system is not enough. On land and natural resource governance, it is argued that, despite the key role of women in food transformation, land ownership and management are traditionally owned and managed by men. The lack of property and decision-making power perpetuates vulnerability, especially in the context of climate change or conflict over land. This is why through agroecology; women's active participation is essential to achieve food sovereignty and greater community engagement. Finally, in terms of participation, they argue that agroecology must challenge the power structure and include the involvement of marginalised groups. For this reason, feminist education is key to equitable participation. Agroecology must put women at the centre, giving them spaces to grow, lead and learn. In short, this review draws a very clear picture of the importance of understanding agroecology from a feminist perspective to reduce inequalities. Nonetheless, the concepts expressed are somewhat vague because they do not exemplify the 13 principles in practical cases, nor do they mention the implications of agroecology practices based on diverse geographical, social or cultural contexts.

When focusing on the practical application, Behl et al. 's (2023) research, which focuses on the context of Himachal Pradesh in India, demonstrates how the implementation of Natural Farming (NF) that is in line with the principles of agroecology can serve as a tool for marginalized women to empower themselves. The researchers found that various elements inherent in the practice of NF, such as participation in workshops and working groups or taking on leadership roles, have provided women with opportunities to gain confidence and capabilities in society. More specifically, they find that NF had a positive effect on the autonomy in decisions about agricultural production; increased economic opportunities and control over income; and the shared workloads within households. Thus, this work pictures the mechanisms that enhance women's empowerment in the labour and domestic contexts. However, it does not consider how these mechanisms can contribute to increased

political participation and local democracy which means that the political dimension is completely overlooked.

As shown in the literature, theoretical approaches and research on political participation and empowerment indicate how structural inequalities and intersectional identities, especially gender and ethnicity, constrain participation. Still, there is a gap around this issue in local contexts. While the potential of practices such as agroecology to strengthen social capital and empower women has been acknowledged, little is known about how these experiences can translate into political participation, particularly in the case of Indigenous women. Therefore, I argue that some mechanisms that make agroecology a tool for political participation are being overlooked in the literature. Therefore, this research would put two dimensions together, Social Capital Theory and Empowerment Theory, to identify all the mechanisms that potentially make agroecology such a relevant practice to reduce inequalities and improve local democracy.

3. THEORETICAL FRAMEWORK

This chapter explores the Social Capital Theory and Empowerment Theory to provide a theoretical grounding to identify the mechanisms in agroecology that influence local political participation. Using key concepts from both theories, the aim is to develop a comprehensive framework that includes all the theoretical insights that will be key to the analysis of the data. Social Capital Theory (SCT) and Empowerment Theory (ET) are considered complementary and non-exclusive in this research. This is because they both have been shown in the literature to be relevant in enhancing civil engagement. Therefore, the combination of mechanisms that both provide could be key to considering all the aspects that make agroecology a good tool for political participation.

3.1. Social Capital Theory

The concept of social capital (SC) has been described by several authors within the field of sociology and political sciences as the resources, benefits and opportunities generated by networks and interactions within groups that share social norms and certain values (Bourdieu, 2004; Coleman, 1988; Granovetter, 1973; Woolcock 2001). Such interactions are based on exchanges which could be both symbolic (e.g. invitation to a ceremony or a social event) and material (e.g. seeds, fertilisers or fruits) and they need to be continuous and reinforced constantly to keep the SC growing (Bourdieu, 2004). Moreover, exchanges and interactions are performed within a certain group of actors, so it is not conceivable to understand interactions and actors in separate settings, but rather they are part of a whole structure. Therefore, the actions that enable SC to grow only affect the individuals who are part of the group (Coleman, 1988). In other words, for SC to be developed, individuals are understood to exist as part of a group that interacts and exchanges other sorts of capital. In such context, individual dispositions such as trust, reciprocity and social skills are also considered, although they are more the consequences than the sources of SC (Woolcock, 2001). Nevertheless, these dispositions have a key role in understanding its benefits. Indeed, SC requires profit and must be productive (Bourdieu, 2004; Coleman, 1988). The profits, which are not necessarily material, are the basis of the solidarity as SC represents the result of investing strategies and personal resources into the use of networks.

Within the SCT, there can be found different types of SC that depend on the actors that contribute to the networks, and they all have different principles. Such principles are the most elementary mechanisms that enable SC to have positive outcomes and that can potentially have a positive influence on political participation. As Putnam (2000) and Fukuyama (1996) state, these mechanisms provide citizens with the skills to actively participate in democratic processes. According to Krishnah and Uphoff (2002), there exist two main types of SC: cognitive and structural. Although they both have common elements such as their aim of shaping social relations between individuals and their reliance on the expectations of individuals, they differ in some respects. Additionally, they both merge and reinforce each other.

On the one hand, Cognitive SC represents the resources that individuals acquire through their relationships with others and from the shared understanding and trust derived from networks of exchange (Grootaert & Van Bastelaer, 2002). It is, therefore, characterized by trust, shared norms and values, solidarity, reciprocity and community identity and belonging that create a predisposition for individuals to perform collective action. Following Krishnah and Uphoff's (2002) definition, this form of SC mainly focuses on what people feel and think, so it is rather subjective and internal. The forms that they discuss that can be considered cognitive SC are “trust, solidarity, cooperation, generosity, honesty” (Krishnah and Uphoff, 2002:88).

On the other hand, structural SC promotes collective action through fewer abstract concepts than cognitive ones. Structural SC is increased via predetermined roles and social networks that are, at the same time, supplemented by procedures, rules and precedents (Krishnah and Uphoff, 2002). The elements that characterise this kind of SC are tangible and objective, they can be identified through group discussions. Moreover, contrarily to cognitive SC, the structural one is not inherent in individuals, but rather external as it can be observed within the interactions between them, and it can be divided into two categories depending on the nature of the networks: bonding and bridging (Putnam, 2000). Bonding SC occurs within individuals of the same group with similar characteristics, it is based on horizontal connections, and it facilitates resources within the in-group (Narayan-Parker, 1999), for instance, the cooperation and solidarity between peasants while working in the plots. Contrarily, bridging SC is based on vertical ties and they are broader than the immediate social connections (Grootaert et al. 2004), hence it refers to the connections of the group with

NGOs, political institutions or other organisations that can potentially provide resources. Nevertheless, both forms are intertwined: when vertical social capital is present but there is no cooperation, the resources obtained through external institutions are not utilised. At the same time, sufficient resources are indispensable for successful exchange between individuals in the same group (Narayan-Parker, 1999).

Building on this theoretical understanding, certain mechanisms that are both causes and outcomes of SC might be found in AEPs. For instance, the fact of sharing agricultural knowledge or seeds with other participants so they can replicate might imply a sense of cooperation and solidarity. Meeting with other peasants after working time can potentially generate informal meetings that help strengthen the social network. Moreover, external spaces such as markets where peasants can sell their surplus might generate external networks and collaboration with other groups. All these factors together might create space and willingness to generate critical discussions regarding political issues of the community and the role of individuals and groups in shaping them. Therefore, cognitive elements like trust, solidarity, generosity, honesty and sense of cooperation; bonding elements like community support, physical cooperation, and participation in informal groups or leadership and bridging elements as external networks and representation or collaboration with other institutions are expected to influence political participation.

3.2. *Empowerment Theory*

Whereas SCT focuses on the ties and networks between individuals that promote collective action, Empowerment Theory (ET) explores how individuals themselves develop capacities to achieve autonomy. Although the concept of empowerment has not been clearly defined among scholars, for this research it can be described as the process by which individuals who have been deprived of their capacity to make decisions acquire the ability to make strategic choices in life (Kabeer, 1999). As Sen (1999) and Kabeer (1999) state, empowerment is not only about acquiring material resources but rather about personal abilities to make informed life decisions. Moreover, different dimensions drive people to become empowered. Firstly, there is the concept of resources or pre-conditions; secondly, the agency and lastly, the capabilities.

The theoretical concept of *resources* introduced by Kabeer (1999) refers to economic and material resources, but most importantly to social resources that improve the ability of decision-making. Such resources can be acquired through social relationships in all spaces of society, from primary institutions like family to public or official organisations and government. Access to resources is essential in determining the degree of empowerment of individuals as it preconditions achieving agency and capabilities. Resources govern the rules under which a community is managed, so they have strong influences on power distribution. Therefore, the lack of resources for a particular group impossibility their representation in the spaces of society. At a practical level, the reallocation of resources described by Kabeer (1999) to marginalised groups like Indigenous women, is a key element for them to gain autonomy over their choices and, therefore, decide on social and political issues.

Regarding *agency*, it can be described as the capacity a person has to do and act freely which also means acting according to one's values (Sen, 1999). Thus, high levels of agency lead to performing actions that are considered to be right by the individuals carrying them out, but low levels of agency result in acting in a submissive, passive and alienated way at one's own will (Alkire, 2008). To elaborate on the concept of agency, Sen (1999) defines five characteristics that should be borne in mind when measuring it.

First, its diversity. Agency includes all kinds of choices in life. For example, keeping your family together, starting a hobby or improving your skills in gardening are considered goals that require agency. Therefore, it is not related to a specific social context or a specific relationship between individuals. Second, effective power and control are part of it. This is, the power to achieve the expected or desired results, both individually and collectively, and the individual ability to make choices and control procedures (Alkire, 2008). Third, the agency is independent of well-being. Although the goals that are pursued may seek the well-being of oneself, this is not a necessary condition. Agency gives the power to pursue goals that are considered good or important to an individual and these may also be related to helping other people even if that means diminishing one's well-being. Fourth, agency-led goals are informed, thoughtful and aligned with one's conception of the goal. Goals related to momentary impulses are not considered to be the fruit of agency according to Sen's perspective since the scholar presupposes rational agents. This is related to the last

characteristic, which is that agency also leads to responsibility, so individuals are responsible and accountable for their own choices.

Lastly, it is the combination of resources and agency that can be considered as the third dimension of empowerment: *capabilities* (Kaaber, 1999; Nussbaum, 2000; Sen, 1999). The capabilities approach assesses what individuals can do and can become regardless of the economic measurements to justify well-being. It prioritizes human capabilities over economic resources and argues that capabilities are what enable human beings to live freely and follow one's values (Nussbaum, 2000). According to this argument, economic growth is not a sufficient condition to achieve a valuable life, and it states that development goes together with the expansion of capabilities. Nussbaum (2000) considers a wide range of capabilities, some of which are particularly relevant to this research:

First, *life body and health integrity*, which means being able to live a healthy life with adequate nutrition, shelter and freedom of movement and exempt from violence, as well as having control over one's physical integrity. Second, *sense of imagination thought and emotions*, as individuals must be able to think and express themselves freely, have educational support and cultural expression and have the capacity to express feelings without fear of harm. Third, *critical reasoning and affiliation*. This is to have the ability to critically reflect on life and make informed personal decisions, as well as to engage in social relationships where one is treated with dignity and respect. Finally, *coexistence with other species and control over one's environment*, as individuals should have the ability to live in harmony with the natural world and to politically participate in governance, have a voice and the right to own and control property and resources.

In essence, Empowerment Theory offers a comprehensive framework for understanding the transformation of Indigenous women's agency, capabilities and resources through agroecological farming. This theory illustrates that empowerment is not limited to access to material resources but also involves the ability to make informed and strategic decisions and to act accordingly. The approach identifies how such initiatives can expand women's capacities, strengthen their agency and encourage greater participation in social and political decision-making processes.

Therefore, the resources provided by agroecological practices such as food and money from the surplus, or the social status and support of other women might facilitate their political involvement. Additionally, through participating in workshops and becoming economically independent from their husbands, women can develop agency. Both combined, potentially involve an increase in capabilities. For instance, agroecology fosters food sovereignty which may positively affect *life, body and health integrity*; Moreover, the exchange of knowledge and the learning processes probably put in value the *sense of imagination, thought emotions* and *critical reasoning and affiliation* capabilities. Finally, the practice of sustainable and environmentally resilient farming, which is the core value of agroecology, and the control over land use and food production potentially develop *coexistence with other species and control over one's environment* capabilities.

4. RESEARCH DESIGN

This research aims to deeply explore the mechanisms under which agroecology can serve as a tool to foster Indigenous women's political participation. Hence, the methodology consists of a Case Study on the Mayan-Q'eqchi' women in Zona Reina, Guatemala who participate in AEPs which combine different qualitative methods: semi-structured interviews and ethnography, including photography elicitation and drawing workshops. Both methods do not have a hierarchical structure, but they are rather combined and considered equally to the analysis. The decision to conduct a case study is made based on the complexity of the setting but also to generate a comprehensive picture of the phenomenon considering the perspectives and perceptions of the participants. This has been considered the most appropriate methodology as case studies aim to focus on interactions and dynamics of individuals in a specific context (Marshall & Rossman, 2014:69) rather than finding general patterns in a broader sample as a quantitative survey would do, for example.

Thus, the following section describes the methodological design adopted to address the topic in this specific case. First, the selection and justification of the case are presented, providing some key background information which assists in understanding the complexity of Zona Reina, the local governance structure and the AEPs. Next, the employed methods, semi-structured interviews and ethnography, are described and discussed, as well as the data collection and sample for each method. Additionally, the ethical implications and limitations of both methods are addressed. Finally, the analysis approach is explained and justified.

4.1. *Case Selection*

Zona Reina is a region formed by 92 communities, most of them part of the municipality of Uspantán in the department of Quiché, Guatemala. It is in the north of the country, 322 kilometres from the capital city, although access to the area is quite challenging as there are no asphalted roads and the climatological conditions may affect the unpaved roads. Despite the difficult access to the area, Zona Reina is home to more than 40% of the inhabitants of Uspantán municipality and most of the population belongs to the Q'eqchi' linguistic group. The region is located at an altitude of 660 meters above sea level and its semi-tropical and humid climate makes it particularly suitable to produce bananas, beans, cardamom and maize,

among other crops⁸. In fact, agriculture has traditionally been the main productive activity among Q'eqchi' communities. However, repeated droughts have hit Zona Reina in recent decades, causing the loss of many crops, especially cardamom.

Another issue that characterises the current socio-economic and political situation in Zona Reina is the history of land ownership. Land sovereignty in Zona Reina has historically been a source of conflict between indigenous peoples, the state and external agents like private companies and landlords. This territory, ancestrally inhabited by the Mayan-Q'eqchi' people, represents much more than an economic resource: it is a central axis of their identity, worldview and community life. However, during the second half of the 20th century, especially in the 1960s, the government promoted agrarian colonisation programmes which, ignoring indigenous occupation, awarded land to external settlers, intensifying conflicts over land tenure. This situation was aggravated during the internal armed conflict (1960-1996), when Zona Reina was the scene of extreme violence, forced displacement and serious human rights violations that particularly affected the Q'eqchi' communities. Today, a large part of the territory is occupied by monocultures and unfair working conditions. Despite this, the communities have developed their forms of organisation such as Deliberative Community Assemblies (DCAs) and COCODEs⁹, although their participation in decision-making is still limited by institutional exclusion.

Building more on democracy in Zona Reina, the main tool of governance DCA. Each of the communities has its DCA ruled by a communal government. It is constituted by an auxiliary mayor, a vice-mayor, a secretary, a treasurer, etc., in total there are 11 authorities. They are democratically elected by the citizens annually and they coordinate with the municipal government to transmit the citizen's demands and establish communication between the municipality and the communities. Additionally, there is the figure of the ancestral authorities, which are small groups of people who are democratically elected and responsible for issues related to Mayan ceremonies and interculturality. DCA are held monthly when

⁸ Information from "28 Pertenencia Sociolingüística, n.d."

⁹ Citizen participation institutions that coordinate local actions, foster collective organization, promote community projects and ensure the inclusion of groups such as women, youth and children in local development (*Consejos Comunitarios De Desarrollo Urbano Y Rural (COCODE) De Guatemala, Observatorio Regional De Planificación Para El Desarrollo, n.d.*).

political and community organisation topics are discussed. Normally, the points to be discussed are about education, the management of water resources and municipal projects like the construction of new infrastructures, which come from Uspantán. As the name suggests, DCAs are deliberative, and all citizens of the Aldea have the right to attend and participate. However, there is a historical misrepresentation of women in such spaces. This research considers DCA to analyse political women's participation as the main local governance institution.

It is also relevant to highlight agroecology project characteristics to understand their functioning and the mechanisms they can provide to promote political participation. PRODESSA's AEPs are designed to empower Q'eqchi' women through education in sustainable agricultural practices and the promotion of food sovereignty.¹⁰ Through regular workshops, five women from each community receive theoretical and practical training in food production, processing and solidary economy. Each promoter replicates their knowledge with five other women, creating a multiplier effect that strengthens local capacities and female leadership. The agroecological approach includes crop diversification, recovery of native seeds and implementation of environmentally friendly practices, such as the use of organic fertilisers and planting according to the lunar phases. Additionally, the transformation of agricultural surpluses into products such as flour is promoted, generating additional income for families. Furthermore, PRODESSA organises farmers' fairs that promote the exchange of knowledge and products and offers workshops on solidarity economy and the prevention of gender-based violence. This research focuses on two projects that started around three years and one year ago and together assist women from more than 12 communities.

Several reasons motivate the choice of this case. Firstly, it is a clear representation of increasingly common practices in Latin American countries. In the specific case of Guatemala, in other regions like Jalapa, Alta Verapaz, El Progreso and Chimaltenango, similar agroecological initiatives are being carried out using the farmer-to-farmer method. These practices started to combat malnutrition, the effects of the expansion of African palm

¹⁰ (*Fase Dos Empoderamiento De Mujeres Q'eqchi'* – PRODESSA, n.d.)

plantations by multinationals and drought.¹¹ Therefore, AEPs in Zona Reina are an example of multiple initiatives that could benefit from the research findings. Moreover, this specific case includes women as the main agents acting in the communities, which allows me to explore the equity dimension of democracy in Zona Reina. Additionally, the characteristics of governance in the region are ideal to investigate political participation, as all the citizens have access to DCA and each community has its space where assemblies are held. This means that there are no other institutional barriers to political participation that might discourage citizens from participating (e.g. Commutes, education qualifications, bureaucratic requirements, etc.). Another reason that motivates the choice is the diversity in time of the current projects, as three years is long enough to see changes in land and crops, and at the same time, they are short enough to identify the possible effects of agroecology without many external factors influencing (e.g. several changes of governments, presence of social media, migration flows, etc.). The fact of considering also participants that only started one year ago could allow for more insights.

4.2. *Data-Gathering Methods*

4.2.1. **Learning from the field. Adapting methods in context:**

Before proceeding with data collection, a preliminary phase of contextual adaptation was carried out for a better understanding of socio-cultural and linguistic realities in Zona Reina. This stage was fundamental to ensure the appropriateness of language and research methods and to avoid the imposition of Western epistemologies in the context of historical marginalisation of Q'eqchi' Mayan communities. Given my external position as a researcher, this reflexive approach sought to enhance cultural sensitivity, relational responsibility and methodological appropriateness (Thambinathan & Kinsella, 2021).

On a practical level, I first established contact with PRODESSA staff in the region, who are also part of the Mayan Q'eqchi' community. In the meetings, the translation of theoretical concepts to the Q'eqchi' language was discussed. Moreover, they provided information about the realities of peasant women in Zona Reina and some historical and political background.

¹¹ *Agroecología En Guatemala: Alternativa Ante La Dependencia Alimentaria - Leisa*, n.d.

Furthermore, advised how to contact participants and provided logistical support. Subsequently, I realized ethnographical observation communities of Zona Reina through attendance at agroecology workshops, informal interviews and basic learning of the language. This was made with the purpose of adaptation and understanding of the background and self-introduction to participants. This period together with the data collection lasted five weeks, starting in the middle of February and ending by the third week of March in 2025.

4.2.2. Ethnography

Ethnography is used in this research in two different ways: through photographic elicitation and through drawing workshops. Generally, this ethnography is characterized by “involving direct and sustained contact with human agents, within the context of their daily lives (and cultures), watching what happens, listening to what is said, and asking questions” (O’Reilly, 2009:3). Considering that, the utilisation of this method enabled the research to reach more insights of how political participation is reproduced daily. However, as the research involves Indigenous women, it attempts to avoid cultural imposition by fully interpreting the participants’ practices from a Western perspective. Therefore, I employed two participatory sub-methods that prioritise the Q’eqchi’ women’s approach by making them the providers of the observational data. Additionally, both allowed certain avoidance of the language barrier creatively by using images as the main tool of analysis. These two sub-methods are described below:

First, *photographic elicitation* is based on the idea of including photography in research interviews to get information that would otherwise be obtained through regular interviews (Harper, 2002:13). The aim is that participants take pictures of concepts or issues that the researcher requires. After that, the pictures are discussed and interpreted by the participant to get a comprehensive perspective on the topic. The choice of this method is motivated by two reasons: Firstly, it is an artistic and creative way of overcoming the potential language barrier and the translation biases it may imply. Second, this method allows the researcher to approximate participants’ experiences by transferring a great part of the data production process to them (Oter-Quintana et al., 2017). Snowball sampling is used to conduct the data collection. As the participants in AEPs have social media like WhatsApp, they are used to contact them. Around 60 women were contacted through WhatsApp groups. Of all the

pictures they sent (21), two were selected to proceed with the analysis. This choice is made according to two criteria: How informative they were and the size of the research. The data collection started by asking them to provide pictures about three different topics related to the theoretical insights and adapted to their context. The topics were chosen according to theoretical foundations about Bonding SC and ET to identify the expected mechanisms, and they were thought to be easily captured in pictures:

- *A moment of cooperation with other women in the community - (Cognitive SC)*
- *Something that represents leadership - (Bonding SC)*
- *Elements of the garden that make you feel empowered - (ET)*

The participants had two weeks to send them, and short individual interviews were conducted with the two selected participants to interpret the pictures. The interviews lasted between 4 and 6 minutes and the guidelines for the interviews were the pictures themselves.

Second, *a drawing workshop* is the second ethnographic data-gathering method used in this research. This method can be considered as a Participatory Visual Research Method (PVRM) which is a research approach that uses drawing as a means to promote the active participation of communities in the generation and analysis of knowledge. It is commonly used in the field of social work and community development as a tool for community participation enabling representation, dissemination and social transformation (Mitchell et al., 2011). For these reasons, PVRM is used in this research to facilitate accessible and culturally relevant forms of expression for Q'eqchi' women while at the same time gathering more information into the research through the production of the drawings and their subsequent collective interpretation. To proceed with this sub-method, a purposive sample was conducted: 36 women of 6 different communities were invited to participate in the workshop, which was coordinated together with PRODESSA'S workshop on the solidarity economy. Most of these women had participated in agroecology for three years or more and, therefore, they had experience. Moreover, they were grouped into 6 groups as the drawings were done collectively and classified according to their communities. Making the drawings collaborative was intended to be a tool to promote cooperation and include all viewpoints in the drawings, while at the same time reassuring the invitation to draw. This follows Mitchel et al. (2011) suggestions on

drawing methods since many women were not used to artistic practices and were reluctant or insecure at first. The workshop was designed in four parts:

1. *Introduction of research aim and discussion about key topics*: Following Mitchel et al. (2011) recommendations on PVRM, this first stage was intended to create a safe space by my introduction as a person and researcher and by clearly displaying the aim of the research. Additionally, key topics such as Political Participation were discussed and participants created their definitions by giving examples of their own experiences. This was key to the research as the concept of “Political Participation” does not exist in Q’eqchi’.¹²
2. *Role in the community before the AEPs*: The participants were asked to draw an example of what their daily life was like before the AEPs started and what a DCA was like. This part lasted approximately one hour.
3. *Role in the community after AEPs*: The participants were asked to draw an example of what their daily life is nowadays and how the DCA is. They were encouraged to draw some other institutions or informal groups where they might participate as well.
4. *Interpretation and discussion*: The participants presented their drawings and there was an open discussion that served to compare and interpret the drawings in a collective way which is used in the research to identify mechanisms in the formal analysis of the drawings.

4.2.3. Semi-structured Interviews:

The method of semi-structured interviews is characterised by using general topics and pre-established questions as a guideline while enabling flexibility to deviate from the original questionnaire if necessary, allowing the interviewee and interviewer to have a more natural conversation (Marshall et al., 2014:163). This method has multiple benefits in this research. For instance, the structure ensures addressing all the relevant topics related to the theory and the research aim. This is important because daily life, economy and political participation are entangled in this case, so unstructured interviews would have the risk of easily deviating from

¹² This is further discussed in the ethical considerations of the methods.

the topic. Nevertheless, the flexibility of semi-structured interviews enables adaptation to each interviewee following their unique experiences and acclimating to their language to avoid language tendency (Alvesson & Skoldberg, 2009). This method is key when addressing participants that belong to marginalised groups, as it puts in the centre the participants' perception of the topics and it allows them to drive the interview into topics that are relevant to them.

The interview guide (See Appendix 2&3 for the interview guide) is divided into four blocks. The first addresses experiences in AEPs to understand the context in which they live and work. Similarly, the second is about the local governance in Zona Reina and the participation of the interviewees in DCAs. The third focuses on SCT, for example, their experiences in terms of cooperation in the plot, leadership, and informal groups. Finally, the fourth covers concepts from ET: resources, agency and capabilities.

Regarding the sample, the participants are selected through a purposive method, which implies that the selection is deliberated according to the qualities of the individuals (Etikan, 2016). Hence, selection is informed together with the NGO workers who are in contact with and possess knowledge about the peasant women in the area. For diversity purposes, seven women from six communities are selected. Among them, four are considered “experienced” as they have participated in AEPs for more than three years and three as “inexperienced” since they only participated one year. This point is particularly relevant as agroecology has a temporal component, as it takes time to cultivate and to get results on the plots. Thus, I expect to observe differences between experienced and inexperienced participants. Additionally, they are all from different ages, that range from 25 to 46. (see Appendix 1 for a descriptive list of interviewees).

About the data collection, the interviews were conducted within three weeks. Thanks to that, my guidelines and objectives were adapted to the background of Zona Reina and the traits of each participant. More specifically, the concepts to be addressed such as political participation, empowerment and cooperation were re-adapted to the context, a fact that is discussed in the limitations of the method. Once in the fieldwork area, participants were contacted during the agroecology workshops, on their plots or in their homes. As the main

language of the participants is Q'eqchi', they were offered the presence of a translator, the workers of PRODESSA, if they so wished. Among all the interviews, three of them required translation support, the rest were conducted in Spanish. The interviews were audio-recorded and later transcribed into a document. They ranged in length from 15 to 45 minutes, and all covered the main themes of the interview guide. However, each participant's experience was unique, so issues specific to each were also discussed.

4.3. Analysis Approach

The analysis approach for this research is a thematic abductive one using pre-established codes taken from the theoretical framework and new codes directly inferred from the data. This procedure allows for setting the grounds for theories but still questions them by interpreting the empirical materials and finding new insights that can add to existing theories and create new conceptualisations (Timmermans and Tavory, 2012). The data of the three methods used are analysed similarly. First, a list of codes is created directly from the concepts mentioned in the SCT and the ET. In the case of the drawing workshop and the photo elicitation, these concepts are adapted to the interpretation of the participants, using mostly the mechanisms that they interpreted and discussed when sharing the data. In this way, a conceptual imposition of Western theories on the interpretation is avoided and the interpretation gap of the researcher as an outsider is reduced. Once the codes are listed, the interview transcriptions are uploaded to the analysis software NVivo, and they are coded according to the experience of the participants. This helps to control for the time factor mentioned in the data-gathering section. Subsequently, the interviews are analysed, and the extracts are categorised into the codes, adding new ones to the extracts that denote mechanisms not included in any of the pre-established categories (see Appendix 4 for the coding list). The same procedure as in the interviews, as well as the same coding list, is used to analyse the pictures of photographic elicitation. Moreover, the analysis is based on the interpretation of the pictures from the participants.

Furthermore, the drawings are analysed manually as they are in physical and not digital format. The process of analysing the drawings consists of the identification of patterns which are common in the different drawings using the concepts provided in the discussion during the workshop. Once again, while some theoretical concepts are coded in the drawings,

identifying other icons that do not belong to SCT or ET is key to generating new knowledge of the topic. The results and implications are developed in the discussion section.

4.4. *Ethical Considerations*

Several ethical considerations must be addressed regarding the methodology, including the data collection process, the employed methods and the analysis approach of the research.

First, *Informed consent* of participants is essential when conducting qualitative research, especially when using visual methods that imply identifiable images of participants. The usage of personal data implies challenges related to anonymity, confidentiality and risk of exposure which could compromise participants' well-being (Wiles et al., 2011). The way to address these challenges was based on transparency and informed consent. However, most participants were not familiar with formal consent so the research purpose, the implications of their participation and their rights were clearly explained. That was following the model of the General Data Protection Regulation provided by the University of Gothenburg. Verbal consent was given, as many of the participants were illiterate. For the photography elicitation and the drawing workshop, they were informed that such material could appear for scientific purposes in the thesis publication. Therefore, as owners of the data, participants can withdraw from the usage of images at any time. Additionally, it was clarified the non-used empirical material would be deleted after the thesis submission and that treatment of the data was done through safe programmes connected to the university system (e.g. Word Office and NVivo).

Confidentiality and anonymity are two other factors that must be addressed. Especially since the research has been done in a very small and isolated area where the neighbours of the different communities know each other. Moreover, the fact that the participation of women in interviews and ethnography in a deeply patriarchal society might be seen by some members as a challenge to power roles. This could have very negative consequences for some of the participants, particularly in the domestic environment, where they could experience violence from other family or community members as punishment for raising their voices. Therefore, it has to do with *emotional risk concerns* as well. To avoid these situations, some measures have been applied during the fieldwork. Firstly, to ensure anonymity while at the same time avoiding paternalistic behaviours as a researcher (Wiles et al., 2011), the participants were

asked to choose a pseudonym that would appear in the final publication. For instance, whereas most of them chose their real name as they expressed their willingness to be heard, others chose a pseudonym for anonymity reasons. They also chose whether their pictures could appear in the research or not. Additionally, the interviews and workshops were held during PRODESSA's workshops and visits, which meant that my work did not cause any disruption to the participants' agendas. Moreover, it is important to bear in mind that these women already took a step towards emancipation when they started participating in the AEPs, which such a was beneficial as they mostly had the tools to raise their voices and protect their physical and emotional integrity.

As slightly mentioned above, *language and translation* are another concern to consider in this research as they influence the research design, the data collection and the analysis of the empirical material. First, Spanish is not the mother tongue of the participants, even though some of them are fluent in it. However, there exist limitations when conducting the interviews in this language as the interviewees might not express themselves as well as if they would speak Q'eqchi'. While some interviews were conducted in Q'eqchi', the presence of the translator might imply a bias as well since on the one hand, the participants might feel pressured to answer in a certain way due to the translator and, on the other hand, the translator interpretation and approach is also added to the responses. Although this is an issue that cannot be addressed in any way, the priority was always to interview in Spanish or Q'eqchi' according to participants' requests. Additionally, the participants were encouraged to express themselves in whichever language they wanted creating a safe space. This way, they would feel more comfortable despite the limitations. Another similar bias arises when analysing the interviews, as the extracts that are used for the results section are translated from Spanish into English, generating another possible gap in the data. To ensure that the essence of the extracts is changed as little as possible, some Spanish or Q'eqchi' words are used if no accurate English translation is available or where it makes sense to preserve the uniqueness of the extract.

Moreover, there are some concepts within the context of Zona Reina and Q'eqchi' language that do not exist in comparison to the Western theoretical concepts. This is for instance "empowerment", which was translated into Q'eqchi' as:

“reechaninkil cho'q we li nawaklesink re link'ulub' ut linloq'al jo' ixq”

The literal translation to English would be something like *“Owning what promotes my rights and dignity as a woman”*. In ad, participants were also referring to empowerment with concepts such as “joy”, “happiness” or “fulfilment” within the context of agroecology and decision-making spaces. Similarly, “political participation” does not have a direct translation in Q’eqchi’. This is why in the drawing workshop there was a previous step of defining the concept by giving examples of the phenomena in participants’ lives. The participants created the following definition through examples:

“Political participation is decision making in daily life, like coordinating the management of the Parcela¹³ or deciding what to eat; talking about our rights as women; sharing agroecological knowledge and asking family for support; having economic capacity; attending and giving opinions in the community assembly; being leaders of women committees, church groups and other informal groups”.

Power dynamics and representation are other concerns to be addressed when researching with minority groups. As an outsider researcher, there is a risk of misrepresenting participants’ voices. To avoid this, participatory research methods are employed as a tool to shift the power balance between researcher and participants to democratize the research process and emphasize the production of knowledge (Cornwall & Jewkes, 1995). This consideration is also reflected in the results section using extracts from the interviews instead of paraphrasing. The interpretation of visual material is also conducted together with the participants for the same reasons.

Finally, for reasons regarding *reciprocity* and *benefit to the community*, feedback on the study will be given to participants and other stakeholders such as PRODESSA. Often, when doing qualitative research, communities participate without seeing any benefits of such an effort. This is the reason why this thesis will be translated into Spanish and provided to PRODESSA so they can forward it to the participants, including an acknowledgement of their time, knowledge and contributions.

¹³ Parcela: A small piece of land where individuals have their gardens in Zona Reina.

5. RESULTS AND DISCUSSION

In this section, the main results of the data analysis are presented. Following the aim to answer the research question: *“How can agroecology projects influence indigenous women’s participation in local governance?”*, major mechanisms in agroecology that are found to encourage Q’eqchi’ women’s political participation are assessed by using theoretical insights and previous literature. Such mechanisms are highlighted mainly using data from the interviews and the photography elicitation. (See Appendix 5 for a hierarchy chart on the coding results). Moreover, new findings emerged through the empirical data and the analysis are addressed to contribute to existing theories, including drawings that highlight the relationship between agroecology and political participation.

5.1. Mechanisms

5.1.1. Capabilities

Firstly, capabilities have proven to be the main mechanism that enhances the political participation of women in Zona Reina by contributing to their personal and political empowerment. For instance, Mirtha explains: *“I sometimes ask myself, why do they hardly take us women into account? And I answer to myself that maybe we do not have the capabilities. But I do feel capable[...] to help my colleagues”*. Anita also states the importance of agroecology on her capabilities: *“Now that I am participating here when I go out to the street, I think I am a brave, hard-working and experienced woman”*.

More specifically, on life, **body and health integrity** most participants argue like: *“All women must have the right to live”* -Pilar. She stressed that *“many women that have suffered violence cannot continue in this situation, one has to raise her voice”*. Juliana, who could escape domestic violence, says: *“No one hits me or assaults me or hurts me anymore, I do not allow it anymore”*. Food sovereignty is also mentioned by several participants: *“This (agroecology) is the most important to be healthy and avoid illnesses [...] work in the parcelas is the most important thing for us, this is the healthiest thing”* -Juliana.

Regarding **the sense of imagination, thought and emotions**, Paulina says: *“Each visit, each workshop helps me to get rid of my fears and empower myself”*. Participants can also freely

express now emotions: *“I feel good, happy and excited about what they (PRODESSA) explain to us”* -Anita; *“I like what I am learning in PRODESSA, I am very happy!”* -Ana Esten; *“I feel proud of participating in the workshops [...] they are fun!”* -Pilar

Critical reasoning and affiliation capabilities also arise in the analysis. Participants state that they can now reflect on their life decisions and engage in their communities to achieve their goals. Ana Mara Santos explains an example: *“The objective is for my community to have a single purpose, a single agreement to reject everything that the agro-industrial companies bring in and that this is no longer consumed”*. Pilar expresses her pride as a woman: *“I feel proud as a woman, and I understand that men and women have the same rights of participating and organising new ideas”*.

Finally, the projects have enhanced capabilities of **coexistence with other species and control over one’s environment**: *“We are going to die, but the earth is going to stay”* -Ana Esten.; *“The environment is very important to take care of because if we do not take care of it, we will suffer the consequences, because if we use chemicals, then someday mother earth will no longer be fertile”* -Pilar.

Such findings align with Nussbaum’s (2000) approach to capabilities, especially as they are mostly independent of economic resources. They reflect how the expansion of capabilities has positively influenced their empowerment. It also reflects Kabeer’s (1999) argument about empowerment as acquiring personal abilities to make informed decisions: now participants say no to violence, freely express their emotions, have objectives for their communities and protect their lands. The findings are aligned with Behl et al.’s (2020) article on Natural Farming. Nevertheless, it is worth noting that while *capabilities* occupy a big space in the analysis, minor extracts are identified as *agency*. As Kabeer (1999) states, resources and agency constitute the concept of capabilities. Therefore, while agency is an abstract concept that addresses free decision-making and goals, it translates practically into capabilities when resources are present. For this reason, when participants speak of their freedom in making decisions about their lives, they apply it to concrete contexts that can be connected to specific capabilities. The two concepts are intertwined, and this does not mean that participants lack agency.

5.1.2. Resources

Another key mechanism that explains the relationship is resources. Both **material** and **social resources** taken from agroecology have an impact on empowerment according to the participants. Material resources are mentioned in different ways. First, through the provision of such by PRODESSA: *“They gave us seeds of various herbs”* -Ana María Santos; *“last month they provided us seeds. [...] Now we eat malanga, sugar cane, bananas... all of these are fruits that we can consume”* -Juliana. Second, through the economic benefits of saving: *“I am very happy because now I am not spending money in the shop. What grows in my Parcela is healthy food for my children”* -Anita; And, from selling the production: *“I am always growing vegetables. I plant my coriander and when it grows, I sell it”* -Ana Estená. Additionally, such economic benefit can lead to land ownership, as Mirtha explains: *“One year ago I bought a piece of land and thanks God I am planting there[...] now we can afford it (living)”*. This mechanism is also pictured in *Figure 1*.



FIGURE 1. PHOTOGRAPHY ELICITATION ANITA: GIRL BUYING GUISQUILES

Figure 1 shows a scene that represents how vegetables become economic resources to peasant women. As Anita explained: *“I sold 100 Quetzales¹⁴ of Güisquil and I explained to that girl how beneficial is to consume organic food”*. For Anita, this is the main source of income, whenever she has a surplus, she sells it. *“If I cannot eat it anymore, it cannot be thrown away, I have to sell it”*, she explains.

According to data, material resources are highly relevant for participants as they enable them to achieve economic emancipation. While ET scholars such as Nussbaum (2000) or Sen (1999) argue that material resources are not enough to achieve empowerment and emphasise other concepts such as agency and capabilities, in the context of this research, material resources acquire a great significance. This is because agroecology is strongly linked to material elements such as land, plots or vegetables, and it is the main economic activity in the area. This aligns with Altieri and Toledo's (2011) research as they stress how the resources gained by farming, enabled energy and technological sovereignty that was reflected in community political engagement.

In the case of **social resources**, their identification is more complex. According to ET, social resources are acquired through social relationships such as family, neighbours and even formal organisations that improve the ability of decision-making (Kabeer, 1999). This is reflected in some responses. *“I have not started (the projects) because I necessarily wanted, but because I was delegated by the community”* – Paulina. Thanks to her social context, she acquired the tools to participate and enjoy the benefits of agroecology. Similarly, Juliana argues that she felt empowered because she received social support: *“They (the community) encourage us, they tell us that we are having dinner because we grew it”*.

Nevertheless, most participants mentioned the importance of the learning process through the workshops. For instance, Anita explained: *“We are already in our fourth year of learning everything: how to manage the land, cultivate and work in women's groups.”* Although knowledge is usually acquired through social interaction, education could be considered as a third resource that adds to the existing theory. Knowledge can come from books, practices and training, self-learning, etc. and not only from social interactions. Thus, **education**

¹⁴ Currency of Guatemala. One quetzal equals 0,13 USD.

resources are considered in this research as an independent mechanism that complements Kabeer's (1999) conception of resources as a source of empowerment.

5.1.3. Bonding and Cognitive SC

The third most relevant mechanism according to data is Bonding SC. Most participants mention **leadership**, either highlighting their role as female leaders like Ana María Santos who states: *"In this project of PRODESSA I am the leader, I make the entire call in my community"*; or explaining how other women inspire them: *"The shyness was killing me because I thought 'maybe no one is going to buy my products', but when I entered the group and I saw the other women that were with encouragement then I thought 'I will do it as well'"*- Mirtha.

Community support is manifested in a similar way to leadership in the data. First, some participants expressed their support to other women in the community: *"I have been involved with supporting the other women in the village [...], when they ask me for support, I am always there to support them."*- Pilar. Second, others explain how they have been supported, *"... When I started in 2023, I almost didn't want to participate. But later, the other women reminded me that it is important, it is important to participate because we learn a lot of things from it."*- Mirtha.

They also mention **physical cooperation** as a bonding experience: *"One time they requested some work, we had to plant everything, and we made it in groups. [...] We organised ourselves, [...] we did some boards as a group because if we did it alone it was going to take us a bit longer"*, explains Juliana. Another example is pictured in Figure 2. According to Elsa, Figure 2 represents a moment of cooperation when taking some goods that PRODESSA provided to store water as some communities lack water sources. Women from different communities were organising the task: *"Some women were counting the number of containers and assigning them to each one"*, explains Elsa.



FIGURE 2. PHOTOGRAPHY ELICITATION ELSA. HANDING OUT GALLONS

Some participants also briefly mention **informal groups**. These are gatherings outside workshops where women discuss agroecology and community issues: *“When I meet women on my way or we go together to run errands, or even when I just meet with my women friends, I tell them about how to work, how to participate...”* – Anita.

In general terms, agroecology practices have promoted horizontal cooperation between women within the same community and for this reason, all these data are interpreted as Bonding SC, as it reinforces internal links that enable collective action (Putnam, 2000; Narayan-Parker (1999). The findings match with Kasanga et al.’s (2020) research where collective work was proved to increase bonding SC. Also, Draper and Freedman’s (2010) and Nettle et al.’s (2016) conclusions about how community gardens foster daily life interactions that keep social networks alive, which is linked to Bourdieu’s (2004) approach.

In addition, all these extracts denote confidence, solidarity and reciprocity which are inherent mechanisms of Cognitive SC as Krishnah and Uphoff (2002) define it. Therefore, although theoretically they are separate mechanisms as they influence individuals differently, they appear together in reality. For example, cooperation, support or leadership imply confidence, solidarity or generosity. In other words, actions and feelings come together according to my

interpretation of the data. Nevertheless, an element that has been identified as Cognitive SC is related to the word “sharing”. The participants mentioned this concept on several occasions: *“I share with them (women), and they tell me that they are happy because I shared how I am working!”* - Ana Esten; *“We all have different ideas, so when we get together, we put them in common, we share them”* - Pilar; This could be translated into theory as solidarity and generosity (Krisnhah and Uphoff, 2002).

5.1.4. Bridging SC

Social networks with external groups occupy a big part of the mechanisms as well. Most of the identified mechanisms are related to **collaboration with other institutions**. The most cited institution was PRODESSA: *“PRODESSA is helping us and we are moving forward and working with women and, for example, some colleagues like Cesar (staff member) [...] that conduct workshops [...] and work with us with 100% respect”* – Anita; *“Most women that go to the market is because they have been in PRODESSA receiving the same formation”* – Ana Esten. On the **representation of the group**, there are some responses: *“I have been in a community energy committee where we have managed the production of community-managed electricity”* – Ana Mara Santos; and in external networks, it is barely mentioned, only in this extract: *“When I receive information (from PRODESSA) I tell the Mayor to please to blow the Cuerno.”*¹⁵

As mentioned, most of the presence of **bridging SC** mechanisms is due to the role of PRODESSA as a collaboration institution with the group of peasant women. One could argue its collaboration should not be considered as bridging SC because the presence of the group exists only thanks to PRODESSA, so there would be no group without that institution. However, taking scholars' definition of bridging SC as vertical ties that potentially provide resources (Grootaert et al., 2004), the collaboration of the NGO is a clear case of the phenomena, and it cannot be considered as bonding SC. Therefore, collaboration with external institutions ensures resources that promote successful social exchange among the group (Narayan-Parker, 1999) and enables self-empowerment (Kaaber, 1999).

¹⁵ Cuerno: an instrument to communicate with the citizens in the Aldea Lote 8.

5.1.5. New Mechanisms

Other mechanisms arising from empirical material are considered. Firstly, **Ancestral Knowledge**. To understand this, it is important to consider that Q'eqchi' people have strong bonds with land and the environment, thus, AEPs have also proved to highlight the importance of land conservation as a core part of Mayan spirituality through ancestral knowledge: *"We need to value the knowledge that our ancestors left, which are very healthy ways of living [...] it is not until now that I remember all that has a value and it is necessary to give continuity to this knowledge through the workshops."* - states Ana María Santos. Similarly, Ana Estená explains how she learnt from her Abuela¹⁶: *"when I grew up I learnt from my deceased Abuela [...] this is what I will tell my children: 'when I grew up this is what my Abuela showed me, this is what you have to do'"*. Nowadays, AEPs put a value on these practices that were on the verge of becoming forgotten. This fact makes them determined to continue promoting ancestral farming practices in the whole community, empowering a way of life suppressed by the agro-industrial system: *"... we have to value, to come back to our practices [...] reject all that agro-industrial companies bring"* – Ana María Santos. **Ancestral Knowledge** is interpreted as a mechanism to empower and build on participants' agency and capacity to change the current system. This aligns with several pieces of literature that highlight traditional practices as empowering and socially transformative (Altieri and Toledo, 2011; Behl et al., 2023; Kansanga et al. 2020).

Another mechanism found to have an impact on women's empowerment is the **recognition of one's rights** as a woman and as a citizen. This is a recurrent topic by the participants: *"All women have the right to a normal life without domestic violence [...] we must raise our voices and say no to violence."* - Pilar; *"The responsibility is to listen to what is being done in our Aldea, [...] this is a right that we women are given. [...] I learned in the workshops that we women have the right to defend ourselves, not to allow them (men) to harm us"* - Juliana; *"we have the right to participate or to plant, we should no longer remain silent. And I have kept this in my mind and my heart [...], I cannot stay at home or keep quiet or be assaulted...."* - Anita. This mechanism is considered a new insight as it is not interpreted as agency or capabilities. On agency, Sen (1999) states that it implies effective power and control over

¹⁶ Abuela: Grandmother in English. The Word has a spiritual value to the Q'eqchi' people.

one's life. However, recognition of one's rights does not imply their accomplishment, but it does provide a precondition for it to happen, as there is consciousness to then achieve informed and thoughtful goals. The same justification happens with capabilities because even though they are aligned with rights and freedoms (Sen, 1999), they require action for their expansion and fulfilment (Nussbaum, 2000) and what participants state is a perception of rights rather than their accomplishment.

5.2. Barriers

Although many mechanisms have been found to positively influence women's participation, there are also a few barriers that hinder the development of women in community life. The main barriers are related to gender inequalities. For instance, Ana María Santos speaks about her attempts to share knowledge with men in her community: *"The problem is that because I am a woman and there is a lot of sexism here... when, for example, today I invited them (men) to come here, they also said, 'it is not a meeting for men' and that they had nothing to do there. So, we are finding that barrier, right? To share it at the community level"*. Mirtha explains the reason why she does not work nowadays: *"For my children who are all young and my husband says 'you better take care of the children, I work. When the baby grows up then you can work'"*. Anita also shares why women participate little in DCA: *"I think most men here want to be in charge. If I say that I want to have a position or to participate among men or... because I'm a woman, they don't accept."*. Nevertheless, the barriers regarding empowerment were mainly mentioned by participants who recently started AEPs. Contrarily, those women who have attended workshops for a longer time, do not face these situations as often. This fact may indicate that the process of political empowerment has a temporal dimension, as the mechanisms appear by working in Parcelas, attending workshops and seeing results. It also might take time for the community to adapt to the new reality of more inclusive governance. In sum, experienced women feel more heard in their communities while inexperienced ones feel their community does not take them into account.

5.3. From mechanisms to participation. Findings from drawings

Although the ethnography through the drawing workshop was intended to identify the theoretical mechanisms in a different format from the interviews and photographic elicitation,

the drawings are rather evidence of the change in lifestyle and participation in the DCAs that agroecology has created. For this reason, they serve as a bridge between the previous mechanisms, and their actual influence on political participation. On the one hand, they show how participants' daily lives changed by highlighting the effects of agroecology (Figure 3, and Figures 6&7 in Appendix 6).



FIGURE 3. DRAWING. DAILY LIFE BEFORE/NOW. COMMUNITY: SANTA ANA

As interpreted in Figure 3, women used to stay at home taking care of domestic tasks and their Parcelas lacked resources, such as huts for the animals. They also used to consume fast food from big industries (Figure 6). Now, they have diversification of the Parcela with multiple vegetables, they cooperate with their husbands or other women, assuming new tasks and breaking traditional gender roles. Therefore, food sovereignty, cooperation and resources are identified in the pictures, aligning with concepts of both SCT and ET.

This new role that women take in their Parcelas has also affected their participation in politics. This is reflected in Figures 4, 8 and 9 (For 8&9 see Appendix 6).

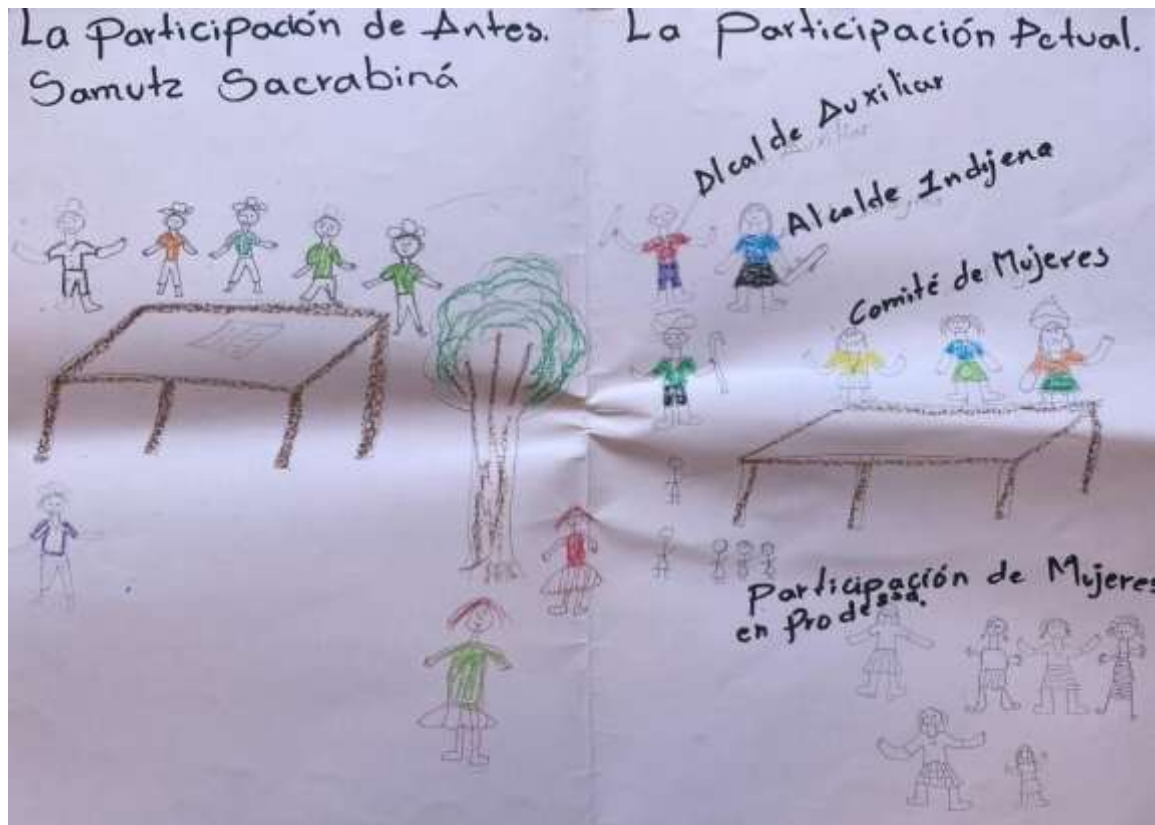


FIGURE 4. DCA BEFORE AND AFTER. COMMUNITY: SAMUTZ SACRABINÁ.

Translation: Auxiliary Mayor; Indigenous Mayor; Women Committee. Women Participation in PRODESSA.

While before AEPs women were not included in DCA and only a few men took decisions on community affairs, nowadays there is a more inclusive governance where women occupy political positions, participate in committees and attend assemblies to give their opinions. There is a repetitive pattern of these phenomena in all the drawings. Therefore, it can be stated that through the expansion of SC and the gain of resources and capacity, among other mechanisms, Q'eqchi' women are empowered to actively participate in local governance.

6. CONCLUSION

This research aimed to explore how agroecology projects can influence indigenous women's political participation by analysing the case of Zona Reina in Guatemala. By using elements from Social Capital Theory (SCT) and Empowerment Theory (ET), the mechanisms in agroecology that could potentially increase Q'eqchi women's political participation were assessed. Thus, through ethnographic participatory methods and semi-structured interviews, mechanisms such as capabilities, resources, cooperation, leadership and ancestral knowledge have been identified to influence the expansion of SC and empowerment. Moreover, it has been noted an increase in decision-making and traditional roles-breaking both in their daily lives and in Deliberative Community Assemblies.

More specifically, it has been found that ET plays a key role in explaining mechanisms that enable participation, especially by the increase of resources and capabilities. To a lesser extent, elements of SCT contribute to the phenomenon, increasing women's community strength. These findings contribute significantly to existing literature by adding a political dimension to agroecology practices, especially in rural areas and within marginalized communities. Not only does it establish a positive relationship between the projects and political participation but also identifies which are the factors that explain such a relationship both from the existing theories and from new insights.

This research and its findings have relevance that transcends its direct context. It shows how agroecological practices intertwine with justice, governance and sustainability issues to foster inclusive political participation and Indigenous women empowerment. First, it addresses historical and cultural issues linked with environmental justice by focusing on the role of historically marginalised groups and their empowerment through practices that aim to enable adaptation to climate change. This is Indigenous women in Guatemala whose experiences are marked by intersectional inequalities: gender and ethnicity. Such inequalities are also present in the socio-economic and political spheres, in a region historically affected by colonisation processes and disputes over control of resources. Therefore, the fact that they regain power over land by practising ancestral farming methods is crucial to addressing climate change adaptation from an environmental justice approach.

The study is relevant at the local level and global context. It highlights the importance of local initiatives resilient to land and its people to address systemic issues of inequality and environmental degradation. It gives relevance to “acting local” to promote sustainable ways of living instead of only focusing on the big global. At the same time, the spreading of these initiatives potentially has a bigger impact on higher levels of governance.

Additionally, the results of this research generate the potential to start similar initiatives in other contexts. It gives room to other communities, NGOs or political actors to incentivize AEPs. It could be particularly useful for similar communities in Guatemala or Central America, and even in other parts of the world. Furthermore, the findings provide a guideline for institutions to focus on the agroecological mechanisms that have proven to be the most explanatory of political participation, like the promotion of the expansion of capabilities, resources or bonding and cognitive SC.

Another characteristic of this research is its significance to the Q’eqchi’ Mayan women and community as it puts value on their specific case. Research can also become a tool that enables them to voice their demands outside of formal institutions as the participants’ experiences are at the centre of the study.

Finally, this research highlights a case of initiatives that enhance the development of indigenous communities, women's empowerment, food health and sovereignty and local governance and participation. This can contribute significantly to UN Sustainable Development Goals (SDGs) 5 on *gender equality*, 10 on *reducing inequalities*, 15 on *life on land* and 16 on *promotion peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels*.¹⁷

Nevertheless, some limitations should be acknowledged. First, there might be other factors that influence political participation other than AEPs. For instance, social media, the influence of external actors or new policies could potentially bias the results. Second, by only focusing on peasant women's perceptions, the approach of external agents like men in community, NGO workers or local authorities is missing. Therefore, while this research puts the centre of the perceptions of a single group, the results do not necessarily reflect reality. Additionally,

¹⁷ (THE 17 GOALS | Sustainable Development, n.d.)

elements mentioned in ethical concerns like language and translation and power dynamics and representation are considered limitations. Moreover, time constraints have represented a barrier in this sense as the fieldwork has not allowed a full integration into the context. Finally, there is a limitation in the transferability of the results to other Indigenous communities and adaptation of the research to the case background is essential to replicate this study.

As further research suggestions, it would be interesting to explore the phenomena in other Indigenous communities in Guatemala to explore whether the mechanisms are common. Additionally, it would be insightful to focus on the time dimension to analyse whether agroecology has the same impact in the short and the long term. Finally, another suggestion is to explore the institutional responsiveness to Indigenous women's participation in local governance and to analyse whether the formal participation of Indigenous women grows as well, for example by focusing on electoral behaviours or the percentage of Indigenous women with political positions. This could even be analysed in a comparative study, by observing whether participation grows when AEPs are performed in the area.

7. REFERENCES

28 *Pertenencia sociolingüística*.(n.d.).<https://muniuspantan.laip.gt/index.php/28-pertenencia-sociolingueistica>

Agroecología en Guatemala: alternativa ante la dependencia alimentaria - Leisa.(n.d.).
<https://leisa-al.org/web/revista/volumen-32-edicion-especial/agroecologia-en-guatemala-alternativa-ante-la-dependencia-alimentaria/>

Alkire, S. (2008). Chapter 24 Concepts and Measures of Agency. In *Oxford University Press eBooks* (pp.455–474). <https://doi.org/10.1093/acprof:oso/9780199239115.003.0025>

Altieri, M. A., Nicholls, C. I., Henao, A., & Lana, M. A. (2015). Agroecology and the design of climate change-resilient farming systems. *Agronomy for Sustainable Development*, 35(3),869–890.<https://doi.org/10.1007/s13593-015-0285-2>

Altieri, M. A., & Toledo, V. M. (2011). The agroecological revolution in Latin America: rescuing nature, ensuring food sovereignty and empowering peasants. *The Journal of Peasant Studies*, 38(3),587–612.<https://doi.org/10.1080/03066150.2011.582947>

Alvesson, M., & Sköldberg, K. (2009). *Reflexive methodology: New Vistas for Qualitative Research*.SAGE.

Armingeon, K., & Schädel, L. (2014). Social inequality in political participation: The dark sides of individualisation. *West European Politics*, 38(1),1–27.<https://doi.org/10.1080/01402382.2014.929341>

Baiocchi, G. (2005). *Militants and citizens: The Politics of Participatory Democracy in Porto Alegre*.

Behl, P., Osbahr, H., & Cardey, S. (2023). New Possibilities for Women’s Empowerment through Agroecology in Himachal Pradesh, India. *Sustainability*, 16(1),140.<https://doi.org/10.3390/su16010140>

Bennett, W. L. (1998). The UNCIVic culture: communication, identity, and the rise of lifestyle politics. *PS Political Science & Politics*, 31(4),741–761.<https://doi.org/10.1017/s1049096500053270>

Boletina Centroamericana de Violencia 3. (2024). In *ORMUSA*.
<https://observatoriodeviolenciaormusa.org/descargar/336/2024/1cb9Ww04oZi0QmPaVc7CsWTyNKc8Nq6pq/10%20-%20Resumen%20violencia%20contra%20las%20mujeres%20en%20centroamericana%20de%20violencia%204%20octubre%20-%20diciembre%202024.pdf>

Bourdieu, P. (2004). *Forms of capital*.

Coffey, C., Revollo, P. E., Harvey, R., Lawson, M., Butt, A. P., Piaget, K., Sarosi, D., & Thekkudan, J. (2020). *Time to Care: Unpaid and underpaid care work and the global inequality crisis*.<https://doi.org/10.21201/2020.5419>

Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94,S95–S120.<https://doi.org/10.1086/228943>

Consejos Comunitarios de Desarrollo Urbano y Rural (COCODE) de Guatemala | Observatorio Regional de Planificación para el Desarrollo. (n.d.).<https://observatorioplanificacion.cepal.org/es/instituciones/consejos-comunitarios-de-desarrollo-urbano-y-rural-cocode-de-guatemala>

Cornwall, A., & Jewkes, R. (1995). What is participatory research? *Social Science & Medicine*, 41(12),1667–1676.[https://doi.org/10.1016/0277-9536\(95\)00127-s](https://doi.org/10.1016/0277-9536(95)00127-s)

Dahl, R. A. (1989). *Democracy and its critics*.

Desposato, S., & Norrander, B. (2008). The Gender Gap in Latin America: Contextual and individual influences on gender and political participation. *British Journal of Political Science*, 39(1),141–162.<https://doi.org/10.1017/s0007123408000458>

Draper, C., & Freedman, D. (2010). Review and Analysis of the Benefits, Purposes, and Motivations Associated with Community Gardening in the United States. *Journal of Community Practice*, 18(4),458–492.<https://doi.org/10.1080/10705422.2010.519682>

Encuesta Nacional de Condiciones de Vida. (2014).*ENCONVI*.

Espinal, R., & Zhao, S. (2015). Gender gaps in civic and political participation in Latin America. *Latin American Politics and Society*, 57(1),123–138. <https://doi.org/10.1111/j.1548-2456.2015.00262.x>

- Etikan, I. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1),1. <https://doi.org/10.11648/j.ajtas.20160501.11>
- Fase dos empoderamiento de mujeres q'eqchi' – PRODESSA.(n.d.). <https://prodeessa.edu.gt/proyectos/zona-reina-uspantan/fase-dos-empoderamiento-de-mujeres-qeqchi/>
- Ford, J. D. (2012). Indigenous health and climate change. *American Journal of Public Health*, 102(7),1260–1266.<https://doi.org/10.2105/ajph.2012.300752>
- Fukuyama, F. (1996). *Trust: The Social Virtues and the Creation of Prosperity*. Simon and Schuster.
- Gliessman, S. (2018). Defining agroecology. *Agroecology and Sustainable Food Systems*, 42(6),599–600.<https://doi.org/10.1080/21683565.2018.1432329>
- Granovetter, M. S. (1973). The strength of weak ties. *American Journal of Sociology*, 78(6),1360–1380.<https://doi.org/10.1086/225469>
- Grootaert, C., & Van Bastelaer, T. (2002). *The role of social capital in development: An Empirical Assessment*. Cambridge University Press.
- Harper, D. (2002). Talking about pictures: A case for photo elicitation. *Visual Studies*, 17(1),13–26.<https://doi.org/10.1080/14725860220137345>
- Hooghe, M., Hosch-Dayican, B., & Van Deth, J. W. (2014). Conceptualizing political participation. *Acta Politica*, 49(3),337–348.<https://doi.org/10.1057/ap.2014.7>
- Indigenous peoples and ethnic minorities: Marginalization is the norm. (2018). In *Report on the world social situation* (97–108).<https://doi.org/10.18356/14642ccc-en>
- Kabeer, N. (1999). Resources, Agency, achievements: reflections on the measurement of women's empowerment. *Development and Change*, 30(3),435–464. <https://doi.org/10.1111/1467-7660.00125>
- Kansanga, M. M., Luginaah, I., Kerr, R. B., Lupafya, E., & Dakishoni, L. (2019). Beyond ecological synergies: examining the impact of participatory agroecology on social capital in

smallholder farming communities. *International Journal of Sustainable Development & World Ecology*, 27(1),1–14.<https://doi.org/10.1080/13504509.2019.1655811>

Krishna, A., & Uphoff, N. (2002). Mapping and measuring social capital through assessment of collective action to conserve and develop watersheds in Rajasthan, India. In *Cambridge University Press eBooks* (pp.85–124). <https://doi.org/10.1017/cbo9780511492600.005>

Lwamba, E., Shisler, S., Ridlehoover, W., Kupfer, M., Tshabalala, N., Nduku, P., Langer, L., Grant, S., Sonnenfeld, A., Anda, D., Eysers, J., & Snilstveit, B. (2022). Strengthening women’s empowerment and gender equality in fragile contexts towards peaceful and inclusive societies: A systematic review and meta-analysis. *Campbell Systematic Reviews*, 18(1).<https://doi.org/10.1002/cl2.1214>

Marien, S., Hooghe, M., & Quintelier, E. (2009). Inequalities in Non-Institutionalised forms of Political Participation: A Multi-Level Analysis of 25 Countries. *Political Studies*, 58(1),187–213.<https://doi.org/10.1111/j.1467-9248.2009.00801.x>

Marshall, C., & Rossman, G. B. (2014). *Designing qualitative research*. SAGE Publications.

Mitchell, C., Theron, L., Stuart, J., Smith, A., & Campbell, Z. (2011). Drawings as research method. In *SensePublishers eBooks* (pp.19–36).https://doi.org/10.1007/978-94-6091-596-3_2

Narayan-Parker, D. (1999). *Bonds and bridges: Social Capital and Poverty*. World Bank Publications.

Nettle, C. (2016). *Community gardening as social action*.
<https://doi.org/10.4324/9781315572970>

Norton-Smith, K., Lynn, K., Chief, K., Cozzetto, K., Donatuto, J., Redsteer, M. H., Kruger, L. E., Maldonado, J., Viles, C., & Whyte, K. P. (2016). *Climate change and indigenous peoples: a synthesis of current impacts and experiences*. <https://doi.org/10.2737/pnw-gtr-944>

Nosotros – PRODESSA.(n.d.).<https://prodezza.edu.gt/about-us/>

Nussbaum, M. C. (2000). *Women and human development: The Capabilities Approach*.

Ostrom, E. (1990). *Governing the Commons*.<https://doi.org/10.1017/cbo9780511807763>

- Oter-Quintana, C., González-Gil, T., Martín-García, Á., & Alcolea-Cosín, M. T. (2017). Foto-elicitación: una herramienta útil para investigar la gestión de la vulnerabilidad de las mujeres sin hogar. *Enfermería Clínica*, 27(5),308–313. <https://doi.org/10.1016/j.enfcli.2017.05.003>
- Paxton, P., Kunovich, S., & Hughes, M. M. (2007). Gender in politics. *Annual Review of Sociology*, 33(1),263–284.<https://doi.org/10.1146/annurev.soc.33.040406.131651>
- Pérez-Vitoria, S. (2005). *Les paysans sont de retour:essai*.
- Putnam, R. D. (2000). *Bowling alone: The Collapse and Revival of American Community*. Simon and Schuster.
- Rosset, P. M., Sosa, B. M., Jaime, A. M. R., & Lozano, D. R. Á. (2011). The Campesino-to-Campesino agroecology movement of ANAP in Cuba: social process methodology in the construction of sustainable peasant agriculture and food sovereignty. *The Journal of Peasant Studies*, 38(1),161–191.<https://doi.org/10.1080/03066150.2010.538584>
- Schlingmann, A., Graham, S., Benyei, P., Corbera, E., Sanesteban, I. M., Marelle, A., Soleymani-Fard, R., & Reyes-García, V. (2021). Global patterns of adaptation to climate change by Indigenous Peoples and local communities. A systematic review. *Current Opinion in Environmental Sustainability*, 51,55–64. <https://doi.org/10.1016/j.cosust.2021.03.002>
- Sen, A. (1999). *Commodities and capabilities*. OUP India.
- Stolle, D., & Hooghe, M. (2010). SHIFTING INEQUALITIES. *European Societies*, 13(1),119–142.<https://doi.org/10.1080/14616696.2010.523476>
- Thambinathan, V., & Kinsella, E. A. (2021). Decolonizing methodologies in qualitative research: creating spaces for transformative praxis. *International Journal of Qualitative Methods*, 20.<https://doi.org/10.1177/16094069211014766>
- THE 17 GOALS | Sustainable Development.(n.d.) <https://sdgs.un.org/goals>
- The Indigenous World 2024: Guatemala. (2024). *IWGIA*. <https://iwgia.org/en/guatemala/5384-iw-2024-guatemala.html>
- Timmermans, S., & Tavory, I. (2012). Theory construction in qualitative research. *Sociological Theory*, 30(3),167–186.<https://doi.org/10.1177/0735275112457914>

Van Deth, J. W. (2014). A conceptual map of political participation. *Acta Politica*, 49(3), 349–367. <https://doi.org/10.1057/ap.2014.6>

Wiles, R., Coffey, A., Robinson, J., & Heath, S. (2011). Anonymisation and visual images: issues of respect, ‘voice’ and protection. *International Journal of Social Research Methodology*, 15(1), 41–53. <https://doi.org/10.1080/13645579.2011.564423>

Woolcock, M. (2001). The place of social capital in understanding social and economic outcome. *Canadian Journal of Policy Research*, 2(1), 11–17.

Zaremba, H., Elias, M., Rietveld, A., & Bergamini, N. (2021). Toward a feminist agroecology. *Sustainability*, 13(20), 11244. <https://doi.org/10.3390/su132011244>

8. APPENDIX

Appendix 1. Participants List:

Nº	Name	Location	Date	Age	Method
1	Ana María Santos	Santo Cristo Buena Vista	04/03/2025	46	Interview
2	Pilar	Santa Ana	05/03/2025	32	Interview
3	Juliana	Campamac	11/03/2025	26	Interview
4	Paulina	Lote 8	11/03/2025	35	Interview
5	Anita	Samutz Sacrabinac	12/03/2025	41	Interview and Photo-elicitation
6	Ana Estená	Samutz Sacrabinac	12/03/2025	38	Interview
7	Mirtha	Saquixpec	13/03/2025	25	Interview
8	Elsa	Saquixpec	13/03/2025	22	Photo-elicitation

Appendix 2. Interview guidelines. General topics:

1. Introduction on participation in agroecology
2. Governance:
 - a. Description of assemblies
 - b. Own participation
 - c. Other's participation
3. SCT (networks)
 - a. Cooperation and support of other women
 - b. Leadership
 - c. Cooperation with external groups
4. Agency
 - a. Perception of decision-making power
 - b. Changes through time?
5. Capabilities

- a. How capable do you feel in land and in governance?
- b. How have you acquired the abilities?

Appendix 3. Detailed Interview Guideline:

1. Introduction:
 - a. How long have you been involved in the project?
 - b. Why did you start?
 - c. How do you feel about working the land, going to community markets, etc?
2. On Political Participation:
 - a. How does governance work in your Aldea?
 - b. Do you participate in Aldea assemblies? Has your way of participating changed since you started the Prodesa project?
 - c. Do you think your voice is now heard in decision-making processes compared to before your involvement?
 - d. In what ways has your involvement in the agroecology project encouraged or discouraged you from joining local governance structures such as the Community Assemblies?
 - e. Is there a specific role or responsibility within the community that you feel more prepared to take on? Why?
 - f. How do you perceive the role of other women involved in the project in influencing community decisions?
3. Community support (women in the workshops) SCT:
 - a. Do you meet with other women in the Aldea to talk about personal issues, your day-to-day life or your families? How often and where?
4. Cooperation:
 - a. Are there practices in the workshops that encourage teamwork and cooperation between women in your community?
 - b. How do you resolve possible conflicts with other women that occur while you are working in the gardens? Can you apply these techniques in other conflicts outside the gardens?
5. Participation in informal groups:

- a. Do you meet with women outside of work? Do you talk about political issues or issues affecting the governance of the Village?
6. Leadership:
 - a. Do you think women in your community have a voice in local decisions?
 - b. Are there any women who have inspired you to raise your voice in this regard?
7. External Networks and Representation:
 - a. Have you participated in meetings or events where decisions have been made regarding the governance of the Village? What was your experience like?
 - b. How often do you meet with Prodesa staff, and do you meet with other people, for example representatives of the Aldea, other communities or COCODE?
8. Bridging relationships:
 - a. Do you collaborate with other groups or other Villages to address common challenges/problems? Can you give me an example?
 - b. Do you feel welcome and even interacting with local assemblies/interacting with PRODESSA people?
9. ET Agency:
 - a. How do you think the project has influenced your ability to make decisions in your household or community?
 - b. What elements make you feel more empowered to make decisions / voice your concerns in the community?
 - c. Do you feel more confident to express your views in community meetings or governance spaces since participating in the project? Why or why not?
 - d. Can you describe a situation where your involvement in the project has enabled you to influence a community decision or policy?
10. Capabilities EP:
 - a. How do you perceive your ability to contribute to decisions affecting land use or agricultural practices in your area?
 - b. Do you feel that the project has opened up new opportunities for you to participate in local governance or community leadership?
 - c. Do you think you are able to participate in local governance? Why? At what moments/spaces have you achieved skills that make you feel capable?
 - d. What skills or knowledge have you gained through the agroecology project and how have they influenced your role in the community?

Appendix 4. Code List:

- Cognitive SC
 - Generosity
 - Honesty
 - Sense of cooperation
 - Solidarity
 - Trust
- Bonding SC
 - Community Support
 - Informal Groups
 - Leadership
 - Physical Cooperation
 - Knowledge exchange (new)
 - Coordination and Organisation (new)
- Bridging SC:
 - Collaboration
 - External Networks
 - Representation
- Resources
 - Material resources
 - Social resources
 - Educational resources (new)
- Agency
 - Recognition of one's rights (new)
- Capabilities
 - Coexistence with the environment and control over ones' environment
 - Critical reasoning

- Physical Integrity
- Sense of Imagination
- Barriers: (new)
- Paternalistic attitudes
- Domestic violence
- Crop loss
- Ancestral Legacy (new)

Appendix5. Hierarchy Chart

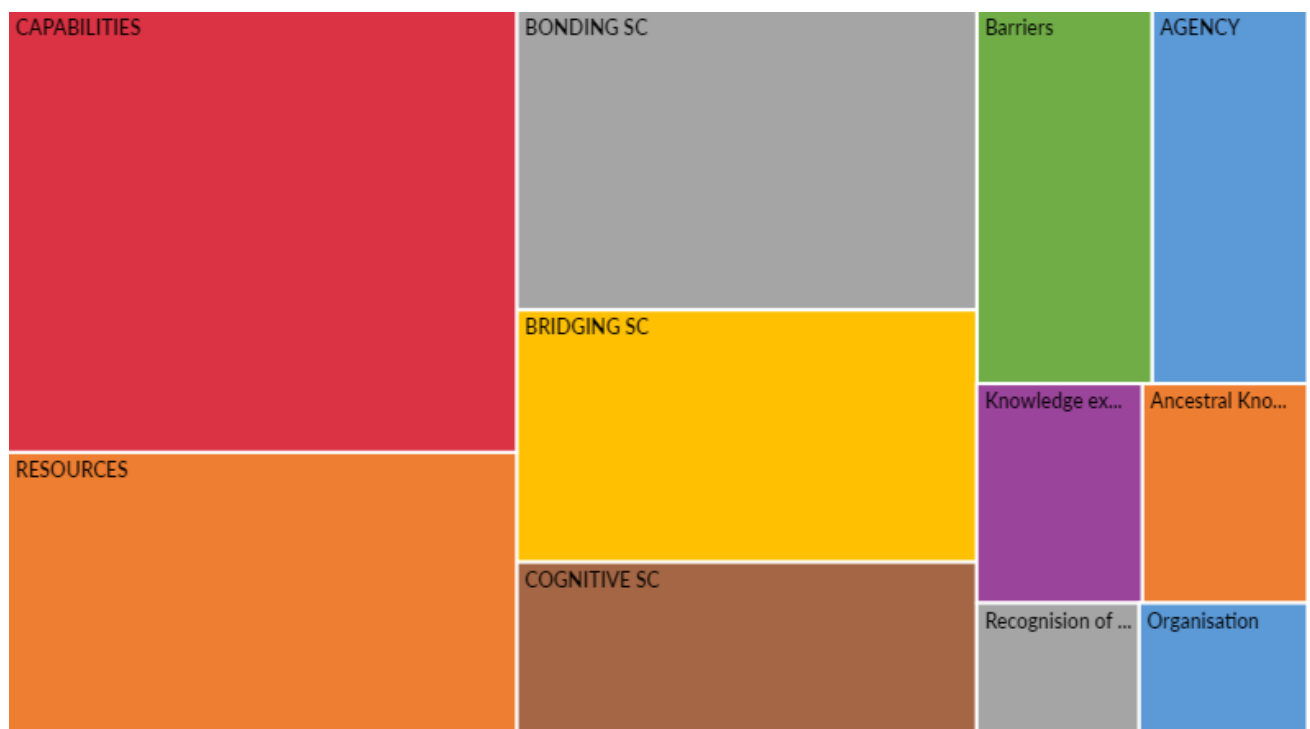


FIGURE 5

Appendix 6. Drawing Workshop:



FIGURE 6. DRAWING. DAILY LIFE BEFORE/NOW. COMMUNITY: SAMUTZ SACRABINÁ



FIGURE 7. DRAWING. DAILY LIFE BEFORE/NOW. COMMUNITY: RÍO AZUL

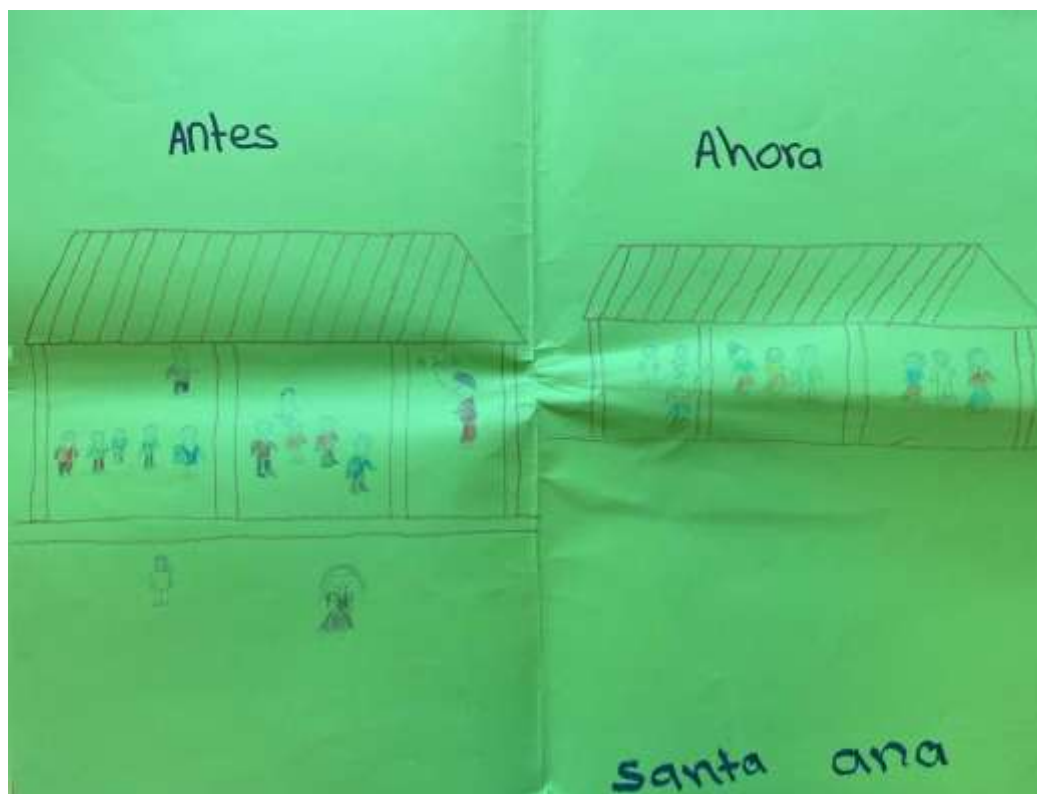


FIGURE 8. DRAWING. DCAs BEFORE/NOW- COMMUNITY: SANTA ANA



FIGURE 9. DRAWING. DCAs BEFORE/NOW. COMMUNITY. RÍO AZUL