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## **Understanding women's stewardship in the Amazon** A decolonial-process-relational perspective

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# **Understanding women's stewardship in the Amazon**

## A decolonial-process-relational perspective

**Subject field/research area:** Stewardship, Gender, Process-relational perspective, Decoloniality, Interdisciplinary research.

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## Abstract

The widespread and increasing forest degradation in the Amazon contrasts with a range of individual or collective practices developed by local agents, which have the potential to reconcile conservation and local understanding of the quality of life and economic development. The role of women among these initiatives has been overlooked or not well understood. Therefore, methods are needed that allow their voices and understandings to be centralized. In this thesis I make use of decolonial and process-relational approaches to do justice to women, as an invitation to a folk science, when addressing questions about their role in landscape stewardship practices in the Amazon. How can these practices contribute in an innovative way to food diversity and biodiversity conservation in the region? What are the processes that can facilitate or restrict women's individual or collective agency?

Women play a crucial role in landscape stewardship. Still, their agency is severely restricted by the ongoing neo-colonial processes, which affects socioecological spaces. However, they have been organizing themselves to overcome obstacles through their local networks. By understanding *womenature* and their stewardship practices of caring for the land as an indissoluble part of the forest means to understand in depth the tipping points of the Amazon, which are interconnected to the tipping points of its populations. This is a key factor to broaden our understanding of togetherness that can lead to a more equitable and fairer path towards sustainability in and for the Amazon.

**Key words:** Gender, Landscapes Stewardship, Process-relational perspective; Decoloniality; Knowledge, Amazon.

## Resumo

A degradação florestal generalizada e crescente na Amazônia contrasta com uma gama de práticas individuais ou coletivas desenvolvidas por agentes locais, que têm o potencial de conciliar a conservação e a compreensão local sobre qualidade de vida e desenvolvimento econômico. O papel das mulheres nessas iniciativas tem sido esquecido ou não é bem compreendido. Portanto, são necessários métodos que permitam que suas vozes e entendimentos sejam centralizados. Nesta tese utilizo abordagens descoloniais e processuais-relacionais para fazer jus às mulheres, como um convite à ciência popular, ao abordar questões sobre seu papel nas práticas de manejo da paisagem na Amazônia; ou como essas práticas podem contribuir de forma inovadora para a diversidade alimentar e conservação da biodiversidade na região?; e quais são os processos que podem facilitar ou restringir a agência individual ou coletiva das mulheres?

As mulheres desempenham um papel crucial na gestão da paisagem. Ainda assim, sua agência é severamente restringida pelos processos (neo)coloniais em andamento, nos quais afetam espaços socioecológicos. Porém, eles vêm se organizando para superar obstáculos por meio de suas redes locais. Entender as *mulheresnatureza* e suas práticas de manejo do cuidado com a terra como parte indissolúvel da floresta significa entender em profundidade os pontos de inflexão da Amazônia, que estão interligados aos pontos de inflexão de suas populações. Este é um fator chave para ampliar nosso entendimento de união que pode levar a um caminho mais equitativo e justo em direção à sustentabilidade na e para a Amazônia.

**Palavras-chave:** Gênero, Manejo da paisagem, Perspectiva relacional-processual; Descolonialidade; Conhecimento, Amazônia.

## List of acronyms

FAO - Food and Agriculture Organization

PAR – Participatory Action Research

SES – Socio-ecological Systems

FASE – *Federação de Órgãos para Assistência Social e Educacional* (Federation of Social and Educational Assistance Bodies)

EMATER – *Empresa de Assistência Técnica e Extensão Rural* (Technical Assistance and Rural Extension Company)

IPAM – *Instituto de Pesquisa Ambiental da Amazônia* (Amazon Environmental Research Institute)

STTR – *Sindicato dos Trabalhadores e das Trabalhadoras Rurais* (Union of Rural Workers)

UFOPA – *Universidade Federal do Oeste do Pará* (Federal University of Western Pará)

## Acknowledgments

I see my political awakening as a unique experience that runs through and connects me to places and no-places, to human and non-human (and also inhumans along the way), to my ancestors that guided me until here and to the spirits of the Amazon rainforest. In these processes, I arrived at the SRC and found a new family, that I have been connected and disconnected to and for the past two years we coevolved in the processes of “becoming” - together. For that, I thank Maria Tengö for choosing me to be part of the AGENTS project, for her patience with me, for her guidance and for believing in me when I did not. I thank Wijnand Boonstra for the depth and sensitivity of his feedbacks and for clearly understand the confusion of my thoughts. I thank Jamila Haider for such radiant and empathetic guidance.

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I am grateful to the artist Thomas Medicus, who kindly granted the reproduction of the images of “Head Instructor” and reminded me of Oswald de Andrade’s Cannibal Manifesto (*Manifesto Antropófago*), which made me realize that I do also “cannibalize” his art to strengthen my own.

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Finally, I would like to thank all the women who co-produced this thesis and welcomed me to Pará, who opened the door to their homes and shared their lives, their stories, knowledge, challenges, tears and smiles with me. With them, I learned that care is done with love, but not always an option; and that we must continue to be resistance through the realization of our “little things”.

## Preface

*“Latin America is the region of open veins. Everything, from the discovery until our times, has always been transmuted into European— or later United States— capital, and as such has accumulated in distant centers of power. Everything: the soil, its fruits and its mineral-rich depths, the people and their capacity to work and to consume, natural resources and human resources. Production methods and class structure have been successively determined from outside for each area by meshing it into the universal gearbox of capitalism. To each area has been assigned a function, always for the benefit of the foreign metropolis of the moment, and the endless chain of dependency has been endlessly extended. The chain has many more than two links. In Latin America it also includes the oppression of small countries by their larger neighbors and, within each country's frontiers, the exploitation by big cities and ports of their internal sources of food and labor. (Four centuries ago, sixteen of today's twenty biggest Latin American cities already existed.) For those who see history as a competition, Latin America's backwardness and poverty are merely the results of its failure. We lost; others won. But the winners happen to have won thanks to our losing: the history of Latin America's underdevelopment is, as someone has said, an integral part of the history of world capitalism's development. Our defeat was always implicit in the victory of others; our wealth has always generated our poverty by nourishing the prosperity of others...”* Eduardo Galeano (1997, p. 2). Open veins of Latin America: Five centuries of the pillage of a continent.

What can centuries of colonization do with a colonized region, a colonized country? What happens with countries that have colonized others? How can we speak of decolonization (or decoloniality) if the history of colonization has been forgotten for decades? How to dwell in the border in an oppressed and oppressive country? How can we really understand the Amazon “without taking account of the manifold processes that have shaped it”? How can racialized, marginalized women in their ‘roças’ (plots) and from their ‘roças’ lead the resistance against the toxic agribusiness and regimes of accumulation, expropriation, and violence? I deepened my own decolonization and started to understand these questions with their help.



## Introduction

Today's challenges, acknowledging the impacts of a worldwide pandemic, expose the global food system's vulnerabilities and inequalities, heightened by some sectors, such as intensive industrial agriculture (FAO 2014, 2017). This type of agriculture represents a large portion of greenhouse gas emissions, responsible for climate change (Walker, 2009). Most industrial, agricultural production of commodities for global markets takes place in countries in the Global South, reinforcing colonial mechanisms based on the extractive exploitation and the commodification of nature (Acosta 2013, Wilson and Stammer 2016, Acosta 2017, McKay 2017, Raftopoulos 2017). The deforestation of the Amazon considered the world's largest environmental tipping point (Nobre and Borma 2009, Nobre et al. 2016), has been accelerated by large-scale projects in the region (Andersson et al. 2014, Castro et al. 2016), for instance, intensive industrial agriculture production of soybeans and beef for export is responsible for illegal deforestation in the Amazon (Rajão et al. 2020).

Similar to other parts of the country, the region is working to overcome colonization's legacy, which left deep wounds such as authoritarianism, institutionalized racism, and heteropatriarchy. However, the current national development agenda for the Amazon facilitates access to infrastructure for large-scale commodities, increasing social and spatial inequalities and various conflicts and injustices (Castro et al. 2016), especially towards family farmers. Family farmers are recognized not only to produce food and commodities that supply regional and global markets but also to contribute to the development of productive agricultural systems and social innovations (Brondízio 2008, Fudemma 2020). Family farming has become widely recognized for its material and immaterial contributions, and its social role through its form of production (Delgado and Bergamasso 2017), but also, through its role in traditional landscape stewardship (Bieling and Plieninger 2017). Family farming is also a lifestyle where agricultural production is a strategy to guarantee food security (Garner and de la O Campos 2014). According to the 2017 Census, in Brazil, as a percentage of total domestic production family farming produces 87% of cassava, 70% of beans, 34% of rice, 50% of poultry and 30% of cattle. These are the basis of the country's diet.

In this setting where large-scale farmers are leading economic, environmental, and social changes which perpetuate unsustainable use of the land, oppressing family farmers, the role of women's in guaranteeing food and agricultural diversity is overlooked or not sufficiently understood. This can be problematic as the paths to understanding and leading the transition to sustainable landscape governance without these women will be inadequate. Women represent more than 40% of the agricultural labour force in the Global South. They are also responsible for the household activities and possess traditional knowledges in agriculture due to their historical practices (Karam 2004), the key to conserving agricultural biodiversity (SOFA Team and Doss 2011). To present the perspective of people who self-identify as women, this essay takes a decolonial and process-relational perspective. Specifically, the use of decolonial theory refers to a decolonial-feminist approach, implicit in the literature from which I have drawn. Nonetheless, I will outline further how decolonial theory and a process-relational perspective fundamentally guides the research. This approach can contribute to a better understanding of the expansion of capitalism and the reproduction of gender inequalities (Verschuur and Destremau 2012). This is

particularly important in a society with structural sexism, as in Brazil, femicide - homicide of women - reached 13 murders per day in 2017 (Cerqueira et al. 2019).

### **Purpose and Research Questions**

I seek to explore the process-relational perspective to better understand women's role in innovative practices in landscape stewardship, which can lead to agricultural, food diversity, and biodiversity conservation. In order to better understand women's role, perceptions, and stewardship practices, it is necessary not just hear their voices but include them in the construction of this essay. To do so, I use decoloniality as a praxis (Smith 1997), which advocates for alternatives and culturally appropriate methods. I elaborate then my analytical question to delve deeper into my collaborators' reasoning, "what did traditional women say about their work in the field, and what are they trying to accomplish?"

I made this a Participatory Action Research (PAR) (Borda 1987) in which I try to democratise knowledge and overcome the binary position of subject-object and engage with women I interacted as *collaborators* – rather than informants or objects of my research. Together with them, I address the following questions:

1. What is the role of women in landscape stewardship practices in the Amazon?
2. How can these practices contribute in an innovative way to food diversity and biodiversity conservation in the region?
3. What are the process that can facilitate or restrict women's individual or collective agency?

Based on these questions, I discuss what can be learned from women for sustainability in the Amazon and beyond, both in understanding their conditions, innovations for the future, and steward's lifestyle.

## Understanding landscape stewardship using a decolonial-process-relational perspective

Here, I will motivate the combination of perspectives and concepts used in this study: landscape stewardship, decolonial and process-relational perspective. There are threaded through the conceptualization and methodology. My collaborators helped me to understand the different concepts from different schools of thought in an interwoven way.

### Landscape stewardship

How do we understand pathways to sustainability in the Amazon? One approach is to start with existing initiatives that have already for centuries contributed to local livelihoods and forest conservation – for instance, family farms. The term stewardship, action in pursuit of sustainability (Bennett et al. 2018), focuses on these positive examples of human nature coexistence in the Amazon. The concept of stewardship is increasingly understood within the framework of complex socio-ecological systems (SES) (Cockburn et al. 2020, Cockburn et al. 2018). Scholars have considered not only the complex characteristics of the SES with its nonlinear dynamics but also focused on understanding the entanglement dimensions of interactions between humans and nature (Berkes, Folke and Colding 2000).

Furthermore, conceptual, and empirical studies of these social dimensions have increased focus on the relationality of these interactions (Cockburn et al. 2020, Garcia et al. 2020a, Stenseke 2018, Cooke et al. 2016). However, studies comprising landscape stewardship that addresses a process-relational perspective with a gender focus is still premature. This study makes use of the definition of landscape as: the sphere in which people and nature interact (Wu 2013); and stewardship as: an embodied sense of stewardship suggested by Cooke et al. (2016) with focus on the dwelling perspective, which encompasses having holistic views, relational worldviews and considering mind-body and human-non-human connections. Without considering the colonial processes that have been shaping people and forest, and the fact that nature is interconnected to women, and is also an entity that must be respected and not stewarded, this concept would be incomplete.

### Infusing: Decolonial-Process-Relational Perspective

From a process-relational perspective the socioecological is one entity, formed through processes and exists due to the interactions between itself, “they can thus only be understood ontologically with respect to each other” (Garcia et al. 2020a:4). For the authors, relationships have a causal agency and occur before objects; hence, farmers are farmers because of their relations with the land. The interaction of these spaces (farms/communities/forest/city) or entities (humans/non-humans/spiritual world) is fundamental to their formation (constitution) – their “becoming” farmers. Therefore, the Amazon can only be understood if we consider the human activity that has shaped *her* landscape (Ross 2017). Hence, these relations are the characteristic of the existence of *humanature* (in this case *womenature* – an understanding of women that is inseparable from nature), as Hertz et al. (2020:330), reflects,

“can we really understand and explain what a social-ecological landscape is without taking into account constantly changing past and present processes of interaction, that at any moment influence, support, enable and condition—and ultimately define what the communities and the forest are?”

Although the processes unfold in different ways, they are, recursive: product and producer of the context. In this case, the colonial relations that profoundly altered traditional women's lives become an ongoing process, with the unfolded events from (neo)colonization (**Box 1**). From the reconfiguration of new possibilities, processes create the present moment, and it reverberates in time and space creating new processes (or possible new futures). "Becoming" farmer finds then a place in the middle of the changes, it is a process that never ends. The processes of change become a fundamental element to understand these women, their actions and/or lack of them. Moreover, it places nature as an entity of equal importance because of its entangled characteristics and the need for an intrinsic ontological understanding womenature.

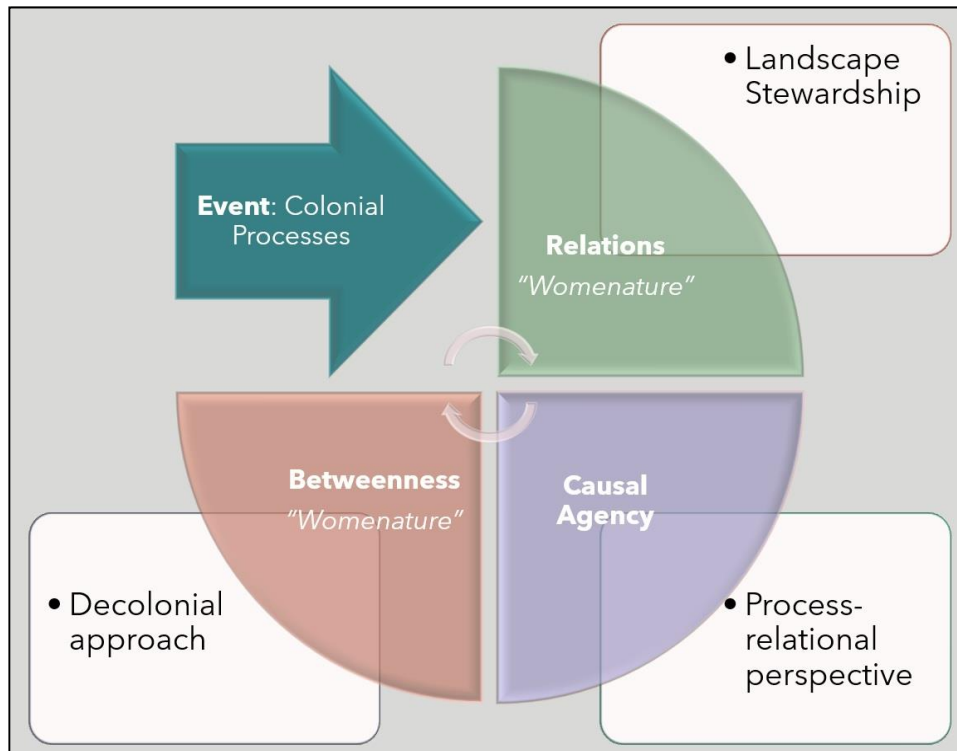
The process-relational perspective recognizes the decolonial perspective of becoming womenature and vice-versa – from colonial relations that dehumanized their bodies (Lugones 2010), but that simultaneously acknowledges women's agency throughout their daily-resistances. Furthermore, it brings justice to the Global South and the communal-self-understanding, where the "I" is, in fact, a "we". Moreover, SES research's decolonial position is fundamental to consider ecological damage as constituting violent political relations (Murdock 2017). The decolonial approach is also essential to deconstruct a "colonial" image of the woman of the south and set who they are in a political sphere (Lugones 2010), as by being Latina, indigenous, Afro or mestiza is to exist towards women's liberation. Therefore, a process-relational perspective is intrinsic to the decolonial thinking and help to understand the formation of places and people, in this case, womenature, represented here by the Amazon Forest. To make sense of the multiple roles and identities that my collaborators are part of, I apply the concept of "dwelling in the border" (Anzaldúa 1987), that I will here call "betweenness" – the living in between rural-urban or traditional-modern.

Decoloniality highlights community-based forms of life including communal ways of thoughts, life, living in the world, which also reflects a relational ontology (Mignolo and Escobar 2010). The communal "lifestyle" can be found in 'community feminism' (Paredes 2008), in the identities of women of the Amazon (Gargallo 2014), and in the struggles of peasant women (dos Santos Calaça et al. 2018). Regarding the relational ontologies about nature, Mignolo and Escobar (2010), offer an interesting view, where nature is conceived of as sentient entities (see also Krenak 2020), nature is an actor that participates in our daily life, as well as in the political arena. For a detailed overview about decoloniality see **Box 1**.

**Box 1.** Quijano (2000), presented a world-system based on the indigenous philosophy, at the heart of the decolonial perspective, which translates into an epistemic, political, and cultural movement to emancipate the colonized. This allows us to understand the "continuity of colonial forms of domination after the end of colonial empires" (Grosfoguel 2008:46). However, to engage with decoloniality is an option (Tlostanova 2019:165), a conscience choice "as a political, ethical, and epistemic positionality". Therefore, it is an invitation to see the womennature not just as stewards, but as part of the becoming forest, who are respecting *her* (the Amazon) rather than managing her. A position that is not impossible to acquire, but impossible to achieve without recognizing it. Understanding *Pachamama* or *Sumaq Kawsay* from the relational philosophies of *Abya Yala* can destabilise structures of modern natural or social sciences and place decoloniality in a political sphere (Mignolo and Escobar 2010).

## Representation of the concepts

To conclude, these perspectives constitute a conceptual framework for thinking with my collaborators in answering my questions (**Figure 2**). The changes that have been occurring due to different colonial processes through history contributed to co-shaping the place, the Amazon Forest, and forming women.



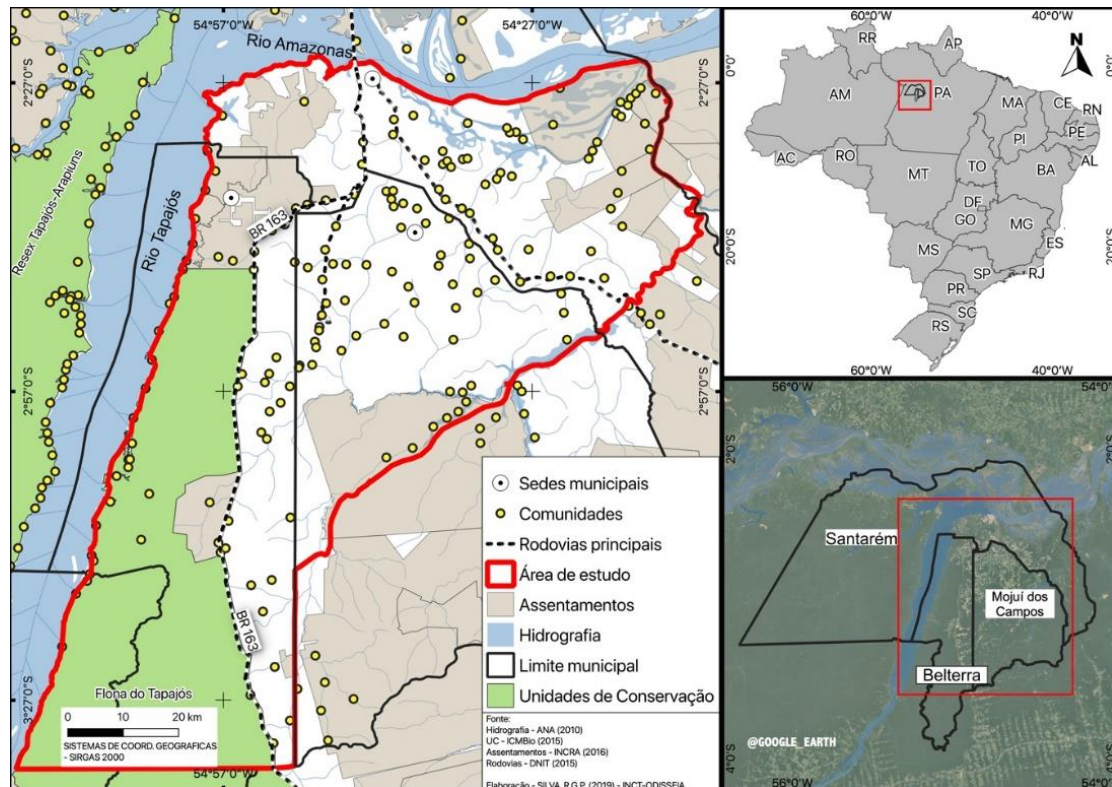
**Figure 2.** The process-relational perspective allows focusing on the event that happened in time and space, the colonisation, unfollowed other colonial processes (events), an ongoing process, which is changing landscape, relations, and the life of women. Rural women are farmers because of their practices (or relationship) in the landscape, which is conceived as a causal agency. These are embodied practices, and because of the constant changes this womennature are now dwelling in the border or living in a state of betweenness.



## Case study description

In this section, I describe the background of the case study (Yin 2009), which is part of the AGENTS Project (Amazonian Governance to Enable Transformations to Sustainability)<sup>1</sup> and took place in the Santarém metropolitan region, which encompasses three municipalities, Santarém, Belterra and Mojuí dos Campos (**Figure 3**) – located in an area called “the new arc of deforestation”<sup>2</sup>. Developed further in the Sampling section, p. 19.

**Figure 3.**



**Figure 3.** Metropolitan region of Santarém alongside Belterra and Mojuí dos Campo municipalities – green figure (Cortes et al. 2020).

Translation of subtitles (from the top-down): Municipal headquarters; Communities; Main highways; Study area; Settlements; Hydrograph; Municipal limits; Conservation Units.

## Western Amazon of Pará – past and present colonial processes

In line with my research approach, I will offer a detailed presentation of the case study, including the region’s colonial history by using the historical systematization provided by Pereira (2012:15-18). The Amazon was seen as a strategic stock of

<sup>1</sup> This research is part of the project Amazonian Governance to Enable Transformations to Sustainability (AGENTS), more information on p. 44.

<sup>2</sup> The term known as the arc of deforestation comprises the region where the highest rates of deforestation in the Amazon are found. It is a territory that concentrates approximately 75% of the deforestation. A recent study with official PRODES/INPE data shows that new municipalities are emerging in the arc pressuring a new frontier of deforestation.

[https://www.socioambiental.org/sites/blog.socioambiental.org/files/nsa/arquivos/nova\\_geografia\\_do\\_arco\\_do\\_desmatamento\\_isa.pdf#overlay-context=pt-br/noticias-socioambientais/discurso-oficial-contra-fiscalizacao-impulsiona-destruicao-da-floresta-amazonica-mostra-isa](https://www.socioambiental.org/sites/blog.socioambiental.org/files/nsa/arquivos/nova_geografia_do_arco_do_desmatamento_isa.pdf#overlay-context=pt-br/noticias-socioambientais/discurso-oficial-contra-fiscalizacao-impulsiona-destruicao-da-floresta-amazonica-mostra-isa)

natural resources and its lands and the ways of life of its people considered disposable, a dynamic that destroyed or disrupted the pre-existing ways of life in the name of the demands of the international market since the beginning of the last century. Santarém is a place for the local elite today, and the cities of Belterra and Mojuí dos Campos function as the periphery of this Metropolitan Region (Gomes et al. 2017), supplying the centre with its labour and natural resources. Although this is not an institutionalized formation, it follows the patterns in establishing a central public power, with the expansion of the public machinery and strengthening private interests.

The region started in 1928 when Henry Ford built the city of Belterra to start the syringe plantation, after an unsuccessful attempt in Fordlândia city. This was possible through alliances between the federal government, Amazonian oligarchies, and international capital. Today, the presence of agribusiness in the region, its processes of the territorialization of capital and the monopolization of the territory were standardized through the narrative of the need for “progress” and the promotion of “economic development”, which includes processes of patronage or clientelism. The concept of clientelism is associated with the concept of *coronelismo*, a fundamental element for the Republic of Oligarchies (Old Republic), which has perpetuated until today as a peculiar form of private power of influence (Leal 2012).

### **Food and commodity production in the region**

The food production in Brazil has undergone a profound process of changes resulting from investments in technology and science in the agricultural sector. This represents a significant step forward in producing commodities to serve global trade (Delgado and Bergamasco 2017). In the Santarém metropolitan region, the production of crops and pasture has increased significantly in recent years (**Figure 4**). Cargill's Bulk Terminal is the second largest in terms of export volume in Brazil and is in the city of Santarém; it has been operating in the region since 2003, acquiring almost all agricultural production in neighbouring municipalities and states (**Figure 4, 5, and 6**), such as Mato Grosso and Mato Grosso do Sul.

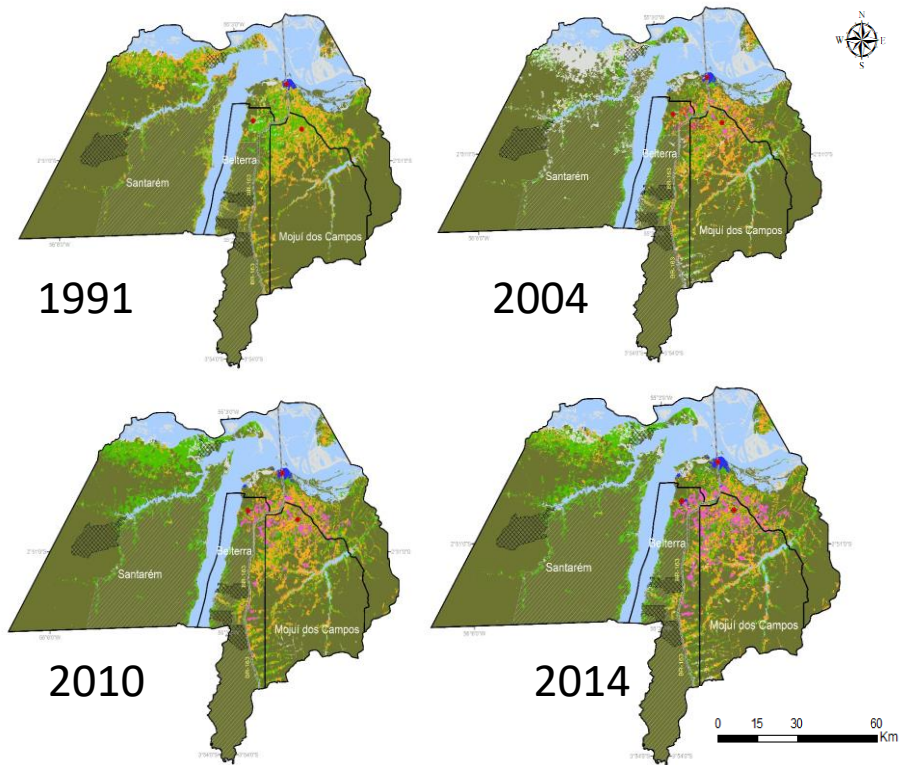
The commodification of agriculture coexists with the traditional and significant production of family farming, which was recognized by the State, Law No. 11.326/2006, which guaranteed the visibility of this type of agriculture and access to public policies, but also threaten other social identities and subjects making them invisible, such as indigenous, artisanal fishers, among others (Delgado and Bergamasco 2017). This is the context in which we find agroecological women of this case study, who act as a force of political, social, and gendered resistance. These women work individually with mutual support through associations and social movements and form a network of local solidarity, focusing on sustainable regional development that has, as its main characteristic the fight against toxic agribusiness.

**Figure 4.**

**Land use and cover**

**Legend**

- Municipality center
  - Main highway
  - ▨ Indigenous Land
  - ▨ Federal Conserv. units
  - ▭ Municipalities
- Land use and land cover classes**
- Old-growth forest
  - Secondary forest
  - Pasture
  - Agricultural Crops
  - Others
  - Urban area
  - Deforestation (year)
  - Water



Data: LULC

Prepared by Monteiro Tourne, D. (Agents, 2020).

**Figure 5.**

**Export values of soybeans and cultivation area in the Santarém region(2002-2019)**



Data from: Comexstat (exportation)  
Sidra/IBGE (Planted area)

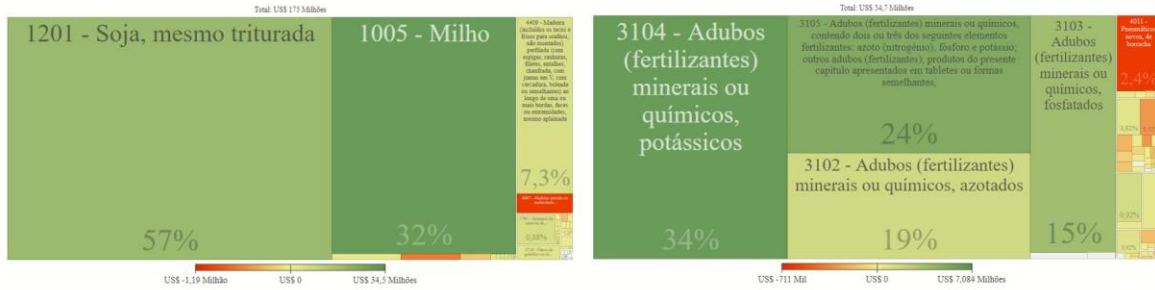
Prepared by Monteiro Tourne, D. (Agents, 2020).



**Figure 6.**

Exported products from Santarem in 2019

Imported products to Santarem in 2019



Cargil port (feb-2020)

Source: Comexstat.gov



**Image 6. Exported products:**

1201 - Soy, also crushed soy 57%; 1005 – Corn 32%; 4409 – Others 7,3%.

**Imported products:** 3104 – Mineral or chemical fertilizers 34%;

3105 - Mineral or chemical fertilizers 24%;

3102 Mineral or chemical fertilizers 19%;

3103 Mineral or chemical fertilizers 15 %;

Others 2,4%.

Prepared by Monteiro Tourne, D. (Agents, 2020).

## Methodological approach

I use decoloniality-as-praxis throughout the research process as a way of imagining and acting other ways to do a research, in which can be more meaningful and functional in countries of the South, considering its epistemic roots and historical contexts. Thinking as an object and subject of research “needs a radical compassion that reaches out, that seeks collaboration, and that is open to possibilities” (Smith 1997:xvi) - to do so, I constant reflect on this as a collective methodological liberation process by asking these questions: Is my work reinforcing structural racism, heteropatriarchal norms, and classicism through my attempt at non-existent objectivity? Who is this for? – as Paulo Freire (1970:60) states “those who authentically commit themselves to the people must constantly re-examine themselves”, in this case, me.

### Positionality: *Quem eu sou - Who I am.*

Positioning is fundamental in feminist and decolonial perspectives; the assumption is that women build meanings in ways that cannot be thoroughly investigated from another gender perspective (Mignolo and Escobar 2010). Moreover, by providing information about my cultural background, I attempt to reclaim my genealogy and position as a mestiza concerning my ancestors (Martin, 2003, cited in Bull 2016). I am a descendant of Indigenous people in Brazil and Europeans, so I identify myself as a mestiza, in the middle of two cultures. Back in Sweden, I am an immigrant, Latina, with a different ethnic-onto-epistemology, but white, therefore, still privileged. This can be considered a border thinking (Anzaldúa 1987), the life moving in between, which can also be compared, in certain extend, to what Du Bois (1903), and later Fanon (1952), theorized about Double Consciousness, a self-formation of a divided cultural identity in a racialized world. I write from someone who experiences the reality of minorities; however, my experiences are different from women in Pará. My intention is not to speak for them, rather learn from them and write from the standpoint of solidarity.

### Decoloniality in Research Design

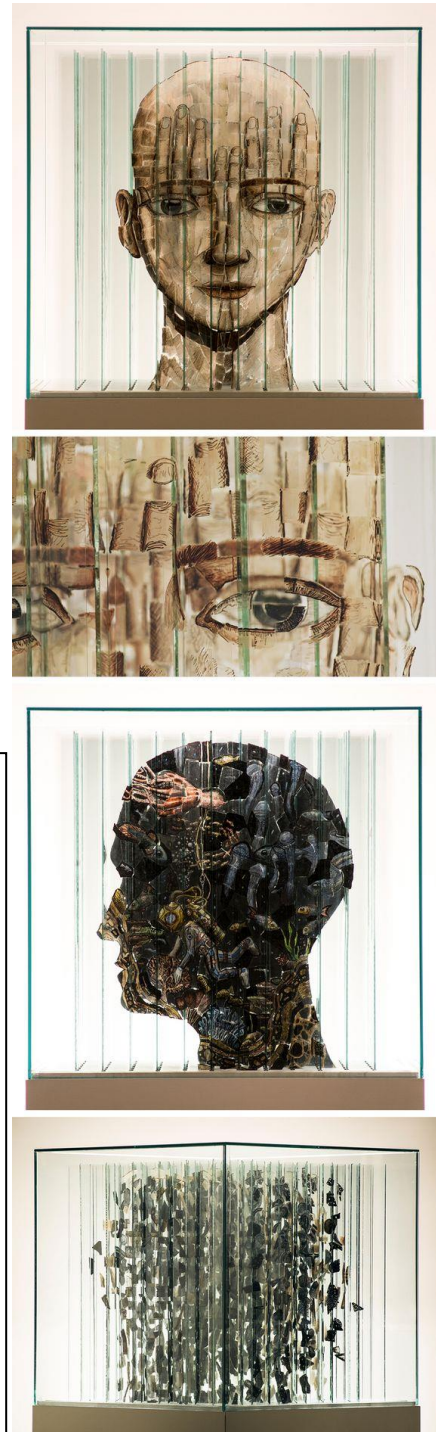
My communal thinking is deeply rooted in the prospect of being a “*sentipensante*”, a person who tries to unite the mind with the heart, to guide life in the right way and to endure its many stumbles (Borda 1987). The Colombian social scientist Orlando Fals Borda and Paulo Freire are considered essential in creating a Latin American decolonial pedagogy. They have inspired this research in the principles of PAR (Borda 1987). Therefore, collective action focuses on the praxis of the methodological liberation process from practice and theory, through the mutual concern to be better understood. Hence, this essay attempts to co-create our own Latin American “folk science” (Borda and Mora-Osejo 2007).

To do this practically, collaborators and I rely on mutual participation and reflection; we talk informally about the situation of women in the social and political spheres and the challenges and alternatives that we live in - I am interested in them, they in me. These conversations took place in different spaces, at fairs, social gatherings and in their homes. It also served to promote self-reflection about our realities, knowledge, and solutions that we seek and put into practice every day. We also held focus groups and in-depth, semi-structured interviews - and, finally, I conducted participant observation working with them in their daily practices.

The validity criteria pertinent to this type of research follow Borda’s orientation on the PAR (1987), in which inductive/deductive reasoning can be derived from common sense. Here I used the abductive approach, in which “neither followed the pattern of pure deduction nor of pure induction” (van Hoek 2005, p. 135), but is the inference of the best explanation (Sober 2020). This is a suitable approach as we live in constant changes, living our relational processes in a continuous adaptation in these complex systems. From the empathic involvement in these processes or the “*vivencias*”, I critically evaluated during the fieldwork the possible results together with the collaborators through conversations (Borda 1987).

Thus, the decolonial methods are fundamental to understand and feel different onto-epistemologies – that encompass our sociocultural realities (**Figure 6**). What you see depends on the methods you use, says artist Thomas Medicus in his sculpture “The Head Instructor”. This qualitative research integrates a more subjective and dynamic humanature experience, which allows me to understand and see the world through this dynamic lens, as (Hertz and Garcia, 2019:9) show it “based on the premise that being is dynamic and that the dynamic nature of being should be the primary focus of any comprehensive philosophical account of reality and our place within it”. However, to follow this approach epistemic disobedience is necessary (Mignolo 2009), and this can have academic consequences, especially when it comes to the bias – yet, Borda (1991) as well as Foucault (1980), considered that knowledge is never neutral, since it carries the class and values of a group and tends to favor those who produce them.

**Figure 6.** - *Head Instructor* - <https://vimeo.com/305597519> by the Austrian artist Thomas Medicus, is a sculpture made from segments of painted and cut glass by hand, at each angle a different image of a head is shown to the public. According to the artist, “when you look at a person, a brain, or the world, what you will see always depends on your perspective and the method you use. There are always facets that will remain fragmented or hidden when you approach only one side” (Medicus cited in Sierzputowski 2019). I use this interactive art as an analogy, in which each person with its own position has its onto-epistemology, but still can see the head-world differently. Decoloniality is the cube’s movement to see and understand the head-world from another perspective – an activity that allows the fragmentation or deconstruction of hegemonic thinking to learn a new perspective of the world. By making use of decolonial thinking, instead of finding a consensus in forming a Frankenstein that can be reproduced and universalized, we would perceive ourselves in a pluriversal world, “a world where many worlds fit”, to paraphrase the Zapatistas. The author authorizes the reproduction of the pictures.



## Sampling

My fieldwork took place in the Santarém region in the State of Pará, Brazil. I visited 14 initiatives and social movements and five fairs (**Table 1**). Part of the AGENTS team had visited the region in the first fieldwork of the project, and my first strategy was to focus on one women's association in the area, visited by them. The choice for a women's association was a decision made jointly with some members of the projects. It was an opportunity to speak with an organized group of women living in different areas. I contacted the coordinator of this association before starting my fieldwork and shared with her my main ideas, she, in turn, shared their work, challenges and how they are organizing to overcome these challenges. I visited women living in three areas: Rural Communities (RC) – where I stayed for four weeks, a Rural Settlement (RS) – where I stayed for one week, and a Conservation Unit (CU) – where I also stayed for a week. Due to the ethical commitment of anonymity, I will not name these communities. I conducted a total of 34 semi-structured interviews with local actors, including government agents, NGO, academics, and 22 people who self-identify as women – 19 of them identified farming as their primary activity – but all of them confirmed having either vegetable gardens or small poultry production in their backyards (**Table 2**).

For this essay to be a real “*sentipensante*”, and to comply with the ethical commitment to think and feel with the collaborators, it was essential to define together the criteria for participation in the study. This “organic” and participative bond with women is a characteristic of the subversive decolonial researcher, which reflects a conscious transgression of the rules of the hegemonic academy, features of Freire and Borda's life-work was described by Colares da Mota-Neto (2018), in which allowed me to build and reassess my strategy with them. As mentioned, the starting point was one of the women's associations; however, almost all of them participated in one of the three women associations or other social movements in the region, so shifting the focus to women rather than one association was natural.

All of them were very open to collaborating in the research and, in many cases, I did not even need to ask them to indicate a new interviewee; they called other women and introduced me. This sampling strategy could be compared to the snowball describe by Moser and Korstjens (2018, p. 10). In that selection, participants through referrals by previously selected participants or persons who have access to potential participants. Thus, it was the main reason for choosing to visit and/or interview initiatives such as Cozinha do Sol, NGO Saúde e Alegria or EMATER. Although COVID19 outbreak in the city prevented me from continuing my fieldwork, I had achieved a saturation point in my data, as my interviews did not aggregate much of new information (Moser and Korstjens 2018). Besides, this interruption allowed me to see how these women organized themselves to deal with an uncertain and stressful situation as the COVID19. Sales started to be online using “WhatsApp” - mutual solidarity in obtaining products to set up “boxes” of food to be delivered were the highlights in this situation. Moreover, this was a solidarity that I could experience myself, besides of receiving me, when they got to know of my difficulties to return to São Paulo, they offered me their homes to have a safe place to stay.



**Table 1.**

<b>Visited Initiatives</b>		
<b>Civil Society/Social movements</b>	<b>Detailed Information</b>	<b>Acting area or Based area</b>
Projeto Saúde e Alegria	NGO	CR, CS, CU
FASE	NGO	CR, CS, CU
TuriArte	Cooperative	CU
4 Irmãos	Association	CU
Cozinha do Sol	Individual initiative of raw vegan food and agroforestry	CR
Caminho das Pedras	Agroecological Community	CR
STTR	Rural workers Union	CR
STTR	Rural workers Union	CR
Amabela	Women's association	CR, CS, CU
AMTR	Women's association	CR, CS, CU
Flores do Campo	Women's association	CR
<b>Educational</b>		<b>Acting area or Based area</b>
EMATER	Official organ of the State of Pará that provides specialized services in the areas of agricultural and human sciences	CR, CS
IPAM	Amazon Environmental Research Institute	CR, CS, CU
UFOPA	University of Western Pará	CR, CS, CU
<b>Fairs</b>		<b>Based area</b>
Alter do Chão	Happening every Saturday	CR - Santarém region
Mercadão	Point of sale open every day, women sell to local fixed salespeople who resell their products	CR - Santarém centre
UFOPA	Happening every Thursday	CR - Santarém centre
FASE	Happening every Friday	CR - Santarém centre
EMATER	Happening every Wednesday. This fair is closed only to farmers who have certified organic products. No collaborator sells at this fair.	CR - Santarém centre
<b>Areas: RC - Rural Communities; RS - Rural Settlements; CU - Conservation Unit</b>		

**Table 2.**

Table of collaborators									
ID	Gender	Age	Self-determination / Main activity	Area	Does the partner work together in the farm?	Does the partner collaborate with household activities?	Does the family help with farming?	Part of social movements	Religion
MA1	F	Mid	Coordinator	RC	Single	--	Yes	Yes	Catholic
MA2	F	Elder	Farmer	RC	Yes	Yes	No	Yes	Catholic
MA3	F	Elder	Farmer	RC	Divorced	--	No	Yes	Protestant
MA4	F	Mid	Artisan	RC	No	No	No	Yes	Catholic
MA5	F	Mid	Baker	RC	No	No		Yes	Catholic
MA6	F	Elder	Farmer	RC	Yes	No	No	Yes	Catholic
MA7	F	Elder	House wife / artisan / farmer	RS	No	Yes	No	Yes	Catholic
MA8	F	Elder	Farmer	RS	Yes	Yes	Yes	Yes	Protestant
MA9	F	Elder	House wife / artisan / farmer	RS	Widow	--	No	No	Catholic
MA10	F	Mid	Farmer	RS	Yes	No	Yes	Yes	Catholic
MA11	M	Young	Government employee	RC	--	--	--	No	Catholic
MA12	F	Mild	Teacher / research	RC	--	--	--	No	Catholic
MA13	M	Elder	Historian	RC	--	--	--	No	Catholic
MA14	F	Elder	Farmer	RS	Yes	No	No	Yes	Catholic
MA15	F	Mid	Farmer	RS	Yes	No	Yes	Yes	Protestant
MA16	F	Elder	House wife / artisan / farmer	RS	Yes	No	Yes	Yes	Catholic
MA17	F	Elder	Teacher/farmer	RS	No	--	No	Yes	Catholic
MA18	F	Elder	Farmer	RS	No	--	Yes	Yes	Catholic
MA19	F	Mid	Farmer	RS	Yes	Yes	Yes	Yes	Catholic
MA20	F	Elder	Baker	RS	No	No	Yes	Yes	Catholic
MA21	F	Mid	Farmer	RS	Widow	--	Yes	Yes	Catholic
MA22	M	Mid	Rural technician - State	RC	--	--	--	--	Catholic
MA23	F	Mid	High-level NGO employee	RC	--	--	--	--	--
MA24	F	Mid	Researcher	RC	--	--	--	--	--
MA25	M	Elder	High-level Union employee	RC	--	--		Yes	Catholic
MA26	F	Mid	Artisan	CU	--	--	--	--	--
MA27	F	Mid	Housewife	RS	No	Yes	No	No	Catholic
MA28	F	Mid	artisan / farmer	CU	No	Yes	No	No	Catholic
MA29	F	Mid	Farmer	CU	Yes	No	No	Yes	Catholic
MA30	F	Elder	Farmer	CU	No	No	No	Yes	Catholic
MA31	F	Mid	Farmer	CU	No	No	No	Yes	Catholic
MA32	M	Elder	High-level Union employee	RC	--	--		Yes	Catholic
MA33	F	Elder	Farmer	CU	Yes	Yes	Yes	Yes	Catholic
MA34	F	Mid	Socio-enviro. consultant	RC	--	--	--	--	--

**The coloured line represents the collaborators who participated in in-depth interviews**

**Areas: RC - Rural Communities; RS - Rural Settlements; CU - Conservation Unit**

### Interviews, narratives, and participant observation

I used semi-structured interviews, consisting mostly of open-ended questions (Kvale 1996, Yin 2013) and in-depth interviews, beneficial when you want to understand and obtain detailed information about someone's thoughts and behavior (Healey-Etten and Sharp 2010). My focus was always to try to think with my collaborators, in this way, I had a form of questions and topics for interviews (see the format and questions at Annexes p. 51) but I started with closed and open questions about their routine - which led me to a rich amount of data on their practices (Millwood and Heath 2000). In this way, they could feel more comfortable to start the interview.

Indeed, I realized that many of them expressed fear of saying "something wrong" or that they "couldn't contribute" since they "didn't know much", which made me reflect on the question of power asymmetries of knowledge, many of them would start saying that they were "just a farmer". My strategy was to speak the truth, "I am a student that would love to learn what you are doing, and if you are willing to teach me, tell me about your daily routine!" By assuming myself as a student with a genuine curiosity about their activities and how they perform them, the collaborators felt much more confident and at ease. The exploratory strategy was also fundamental to form a theoretical approach that could be closer to their reality.

My participant observation took place more practically by living with women in their homes and communities. For instance, at CU, I talked to the matriarch, a 102-years-old lady, the community then welcomed me for a week. I started my observation questions participating in a community party, a women's soccer game, harvesting fruit in the forest, bathing in the river with women and helping the employees in their day-to-day activities. This allowed me to focus on specific situations, such as the fact the women I followed were doing everything, taking care of the house, children, plot, animals, going to the forest, and their gardens to collect fruits. Finally, this leads me to a selective observation (Moser and Korstjens 2018), of the performance of these practices that happen in their daily activity, such as the mutual help between women trying to schedule the day and the tasks that each one had to do alone and those that they could do together.

### Focus group

I also held two focus groups, one in an association in a CU, and the second one was held at the fair in the headquarters of FASE-Santarém, with the women from the RC and RS regions (**Table 3.**). The focus group had a specific purpose in this thesis; therefore, its analysis, occurred with collaborators while carrying it. Its material served for the general analysis of the essay.

The focus groups were essential to developing a participatory scenario of the future, which served to identify possible or desirable endogenous and exogenous changes (Garcia et al. 2020a). Furthermore, I was interested in (i) accessing the meaning of the word sustainability for them in their concepts and concerns; (ii) stimulating the production of conversations on a specific topic; (iii) and observing the process of collective construction of meaning in action through the thought of individual and collective action on the construction of the sustainable future they desire (Wilkinson 1998). The structured of the focus group was inspired by the principles of Theory U (Scharmer 2007), in which I facilitated the discussion through five steps:

1. Identifying challenges that they would like to change in the future.
2. Break patterns of resistance by inviting them to take a moment to meditate to shift off the challenge moment and ‘suspend’ the judgment voice and redirect them to the next step.
3. Brainstorm the meaning of sustainability according to what they understood about it and collective discussion on how to group the words – feeling and letting go of the future’s fear.
4. Divide the group into pairs to discuss what would be a desirable sustainable future based on the three pillars of sustainability (social, nature and economic); finally – the intention was for them to connect the themes with their work through reflecting on the meaning of the words they just said to reach a “*crystallization*” of their vision and intention.
5. They present their envisioned sustainable future and how can they actively play a part in building it. They discussed with other participants whether they agree or not.

**Table 3.**

<b>Table of collaborators - Focus Group CU - 13/3/2020</b>				
<b>ID</b>	<b>Gender</b>	<b>Age</b>	<b>Self-determination / Main activity</b>	<b>Area</b>
MA29	F	Mild	Farmer	CU
MA30	F	Elder	Farmer	CU
MA31	F	Mild	Farmer	CU
MA35	F	Young	Student	CU
MA36	F	Mild	Farmer	CU
MA37	F	Young	Student	CU
<b>Table of collaborators - Focus Group RC and RS - 23/03/2020</b>				
MA7	F	Elder	Farmer	RS
MA8	F	Elder	Farmer	RS
MA14	F	Elder	Farmer	RS
MA20	F	Elder	Farmer	RS
MA33	F	Elder	Facmec	CU
MA38	F	Mild	FASE staff	RC
MA39	F	Mild	Farmer	RC
MA40	F	Elder	Farmer	RC
MA41	F	Mild	Farmer	RS



### **Data analysis**

I developed the “hybrid form of the thematic analysis” suggested by Boyatzis (1998:51), recommended when one group has been studied (women) to identify meaningful themes, divided into four steps:

1. Reducing the raw information by summarising all the raw data.
2. Allowing the benefits of an inductive approach to know what emerged from the data, yet, adopting definitions of previous research on landscape stewardship and process-relational perspective was fundamental to create nodes and themes such as changes, challenges, knowledge, gender, landscape stewardship, etc.
3. Creating nodes and themes.
4. Determining the code’s reliability by asking a member of the AGENTS project to identify in the data codes and themes from approximately 20% of the interviews (6 interviews) to do the coding procedure.

Then we reconciled the coding schemes by debating duplications, definitions, and excessive details. After some discussions, a final coding scheme was agreed. Also, I went back to my data and reapplied the themes and sub-themes. Finally, I shared the results with three women (coordinators of women’s association from each region), who validated it.

### **Language**

Language, in this case, the English Language, has been the most powerful strategy to perpetuate colonialism (Phillipson 2007, 2008, 2012, Barrantes-Montero 2018). I must write in English; I must do that well, otherwise, my essay will not be even acceptable to the academic standards. How to translate the conversations held in Portuguese into a foreign language that sometimes fails to capture the meaning of what was said, the jokes, the smiles or the silence that carries all the worlds within it? As Van Nes et al. (2010:313) has been argued, “meaning is constructed through a discourse between”, therefore the aiming is “to contribute to the best possible representation and understanding of the interpreted experiences of the participants and thereby to the validity of qualitative research”.

## Results

My ambition is to present the results in a way that is true to my collaborators' words. I present here the main results of my thematic analysis, focusing on this thesis's objective, to understand the role of women for landscape stewardship practices, divided into two parts, first with the overall themes and secondly the future visions result from the focus groups.

The three themes identified: 1) Relations, 2) Change, and 3) Hope – are presented along with the sub-themes and the quotes for women of the three regions (Rural Communities – RC, Rural Settlement – RS, and Conservation Unit – CU, **Photo 1**). By doing that, my intention is not to compare the regions and their women, instead, I would like to propose a reflection on each location's particularities, also because most of the collaborators are living between these regions because of their multiple activities. At the end of each part, there is an interpreted table of the results validated by women's coordinator of social movement in each region. A visual representation of the main results can be found on pg. 36.



**Photo 1.** Initial steps to traditional production of andiroba oil, FLONA-Tapajós (Taís González, 2020).

### 1. Relations

Between observations and conversations with the collaborators, they explained to me how they had another way of living and thinking, not just relating to their plants and animals, but also regarding accumulation and consumption, as many claims to want “just enough”, or to like to do their “little things”. Many of them revealed that the knowledge they bring is matriarchal, especially in CU.



Women also reveal knowledge connected with nature, for example, through forest medicine; usually, medicinal and ornamental plants are close to their house (**Photo 2**), demonstrating a hierarchy between plant species, since those of the distaff are further away from your home and do not require intensive care (**Photo 3**); and knowledge about childbirth - as midwives. However, in the three regions they report to be fundamental, in addition to their empirical knowledge, the knowledge that they can and acquire through contact with actors in these regions - for example with EMATER, IPAM, UFOPA and NGOs, as we can see in **Photo 4**, a production with organic pesticide and coverage to protect from the sun, implemented by professors from UFOPA.

In the three regions, they treat the relationship with the land as something positive and caring, for example, women seek to know how to produce without agrochemicals, also known locally as “poison”, even with the increase in pests (and for this the contact with the partners above was considered essential), because they want to preserve nature and the health of themselves and their families. In the three regions, they claim to be more careful than men; in fact, care is reported as a women’s characteristic.





	<b>Rural Communities</b>	<b>Rural Settlement</b>	<b>Conservation Unit</b>
<b>1. Relations</b>	<i>We [women] have a different way of thinking, those who want to earn a lot of money, spend a lot of money too, but I don't, if I am earning enough for me is good. I could cut it all off and plant only one thing and then I would make good money, but I don't want to. I don't want to take all of the wild tree, I don't want food just for myself, I want that the little bird and the little monkey to have their food too... I think that everyone has the right to eat. (MA2)</i>	<i>I wake up at 5 am I wake up I make coffee and I will take care of the chickens, chicks and pigs. After that, I start to take care of my plants, make a bed, load soil, make compost and to plant. At about 11 am I come inside to start off taking care of lunch. I then wait for the sun to come down and around 4 pm I work a little more with my plants and then I go to see my soap opera. And that's the routine, day in and day out, month in and month out, year in and out year. (MA21)</i>	<i>I really believe in the enchanted, I was created in that way, that's our culture. I believe in the dolphin*, so I can't take a bath in the river after 6 pm. I believe in the power of the benzedores (healers) too, although today there are not so many, they were the doctors of our time, but still today there are some in the community. (MA32)</i>  *The credence is that the pink dolphins can come out of the water in the form of a man during the early hours of the night to seduce
<b>1.1 Care</b>	<i>The woman is more careful, and she can better identify the development of the plant. My brothers and my children plant it anyway, but if you plant it anyway, that maniva will be born all messed up, when you pull it out it will be a problem. What we [women] also learned is that most of the time they call it a pit, but we don't, the pit is for the dead, we call it the plant's cradle, the seedling because from there the <u>plant</u> will grow and develop if you say it's a grave, you're saying that <u>she</u> will die. (MA3)</i>	<i>The woman is more careful, takes better care of things and at home they are the ones who take care of things too, the man doesn't care, right? He doesn't even look to the things around him! (MA21)</i>	<i>Here is very good for the tourist who comes here to know the forest, our plants - and we have a lot of different things! And we [women] don't have the same "gardens", and each one of us has different things in our "gardens", there is a lot of medicinal plants too; if one feel some pain here, we take everything from the forest... In my garden, I have all kinds of medicinal plants, and I have them near my house. (MA29)</i>
<b>1.2 Knowledge</b>	<i>Everything I do is traditional and cultural, my mother from a young age had free-range chicken, and the manioc, my parents are farmers and even today they make [cassava]flour and its derivatives. The way to pull the flour, which is with the squeegee is very traditional and the tipiti they take from the tapioca and not from the flour. It's something I've been doing since I was little, it's a tradition. It is a culture of ours of our region. (MA4)</i>	<i>Everything I learned, I learned from my mother! (MA21)</i>	<i>[andiroba oil] is very traditional here, we have been doing it for over 20 years. Mom was already doing it and it was with her that we [women] learned, with Mom, Grandma. [...] The free-range chicken I think is something traditional because we always raised and my mother also raised it, she always raised and liked to raise chicken. (MA31)</i>
<b>1.3 Network</b>	<i>I used to make the garden before, but I had a greater incentive with the women's association and with the EMATER people who support us, all of us here. They help by giving courses or visiting us if we have any questions we can call them and they come here to our home [...] I always liked to do this. Still, just because I like it, now I have their incentive to produce for sell it, and with the courses and information they give it is easier to produce [...], but I am not a big producer. (MA7)</i>	<i>I thought it was beautiful a group of women; I had never seen an association only with women, there is always a man in the middle. I thought it was cool and started going to the meetings in Santarém [...] It was excited, a bunch of women all happy going to the fairs and it was very good, everyone happy, nothing of sadness just joy! (MA15)</i>	<i>We do have those women who join [in a women's association] to get a benefit, which I don't think is very fair. Because... I get very angry when people say that Lula's government made everyone lazy and now the people don't work. People do work! Some more, others less, but it's true that there are those people who are corrupt, but they are corrupted only because there is a corruptor. (MA32)</i>
<b>1.4 Landscape Stewardship</b>	<i>[the rescue of Creole seeds] is important to show to people that these fruits and vegetables already existed without having to much things [pesticides] [...] That big passion fruit over there is the "melon passion fruit", which is not acidity and is very good for making juice. It's sweet and has a lot of filling, but it's practically extinct. People just want to eat; they don't want to plant! I got it when I went to RESEX-Arapiuns; I saw it and I asked to the indigenous there if they could give it to me and they gave! [...] So it's very beautiful, and you can't let these things die! (MA2)</i>	<i>I see these initiatives by collective or individual women here, and I keep thinking that it is not necessary to destroy everything, you can do it like this slowly, calmly as we [women] do. (MA18)</i>	<i>We [women part of women's association] work and produce as family farm with agroecological practices because we have been fought so much against agribusiness as they brought pesticides to our region, that we want to do differently, we want to be the resistance. (MA32)</i>

## Interpretation of the results review by the women

Themes and subthemes	Description
1- Relations	<b>Women are farmers because they work in the land. They have another way of relating to the (local) environment in which they live, their family, other women, and people in their network of contacts, and their production (including medicinal plants and animals). They also witness the relationships (and changes) that occur within nature.</b>
Care	Women care more for their families and their production than men, whether in agriculture or caring for animals (especially small animals like chickens and pigs) - women are more careful than men.
Knowledge	Relationships also occur through knowledge and its exchange, learning and teaching. In addition to their practical knowledge (often learned from their mothers), they acquire knowledge through contact with technicians and teachers, friends and/or neighbours, and the environment, observing the development of plants, animals and their produce. This exchange also brings new "formulas" to farm and produce food.
Network (Women's Association and others social movements)	Participation in women's associations has its importance because they work with women's agendas, they feel more freedom, confidence, and joy in being among women. However, there are many difficulties and challenges within the women's associations. Other social movements include unions, churches, NGOs, and institutions that support their production by given agricultural assistance.
Landscapes Stwerdship	Women's narratives and acts of care and restore of the land/forest through agroecology, agroforestry, or the rescue of traditional knowledge such as Creole seeds.



## 2. Changes

Women spoke of changes negatively and positively. Everything related to the ecological change was negative in the three regions unless they presented a new way of producing, such as agroecological production or reforestation. The shift for a more organized selling process was also pointed out in the three regions as something positive (**Photo 7**). The only product that is an exception is the cassava flour; many had already made flour to consume and to sale. Social changes regard in their communities in the three locations are seen negatively. In CR and CS, they connect landscape changes (deforestation and abandonment of communities) with the large-scale soy and/or cattle producers. In CU, they talked about changes in communities as a "lifestyle" change.

Challenges directly influence them, and it can lead to changes, the challenges are different in the regions. CR connects the challenges with the large-scale soy producers (**Photo 8**), CS connects its most significant challenges to the large-scale cattle producers and the lack of infrastructure. Finally, CU relates its challenges to soy producers and the legal and illegal extraction of wood. In the three regions, the distance was unanimously identified as a significant challenge, mainly to sell their products.



**Photo 7.** Women farmers selling their products through partnerships with social movements in the Santarém region (Taís González, 2020).



**Photo 8.** Children playing in front of the soy plantation, Belterra, PA (Taís González, 2020).



	<b>Rural Communities</b>	<b>Rural Settlement</b>	<b>Conservation Unit</b>
<b>2. Changes</b>	<i>The opportunity we had to transform our production for sale is innovative. Because before we only sold pulp, today we do make all of the fruit derivatives. Innovative is also sales opportunities because before we had no one to sell to before our production was spoiled, today we have the fairs, markets and spaces offered for us to sell our production. (MA3)</i>	<i>It has changed a lot here, [before] it was just forest, forest, forest... There wasn't even this road here. At that time it rained a lot, sometimes it rained for weeks, it was a lot of rain, now with these climatic changes it hardly rains as before, and it gets very hot. These are the changes we are already feeling. It started raining in November and when was the time to burn [the plot] we had to be careful because if we didn't burn at the right time, we couldn't plant anymore. After all, it was a lot of rain. But that's already changing; now it starts to rain in February or March. It is man's disobedience... If you walk through these villages here, you will see that the forest is already cleared down. (MA20)</i>	<i>In the past, there was a lot of that "Mirajussara", which is that hardwood, Ipê, Bacurizeiro, even from the edge of the iguarapés, but today the people took everything away. Many people took that big wood from their areas, you can walk around that you can't find these trees to take wood more like this big one [...] is valuable and her wood is very beautiful to do these slatted rafters, ripão - but it's over. (MA30)</i>
<b>2.1 Production organization</b>	<i>It was a combination of knowledge [participation in social movements, unions and women's associations]. And our experience of exchanging seeds and exchanging knowledge is very important for us, you give your experience, and you gain experience from others. How to save the product, we already knew, but we improve more. Corn, for example, I learned from my parents and grandparents to put a clothesline across the wood fire and stick it there to save for the next year crop. I [start to use] use a PET bottle or a glass bottle, I wipe and put the beans or corn for the next planting, but also for eating. (MA3)</i>	<i>So, almost not much had changed, because when my father planted here, it was in the same way, he prepared the plot and burned - but today we are using less fire [...] but sometimes we [the family] still need the fire because the grass can become very high, and then you need to put fire to be able to plant. We were doing this with manioc and corn; manioc likes the burnt earth, it grows better. (MA20)</i>	<i>Look, what changed for us was to work together [the women], because we organize and talk a lot about our work now and how we will work in the future ... because we don't want that [production of andiroba oil] only for us, we are creating this for others as well. Because we think that in a year or two if God gives us health and life, we will already have an income to hire other people as well. Especially in the breaking of andiroba, because if we have ten bags of boiled andiroba, as I told you, it's a lot, but if we have two or three more people, we can enjoy more. Now we have no way to pay someone to work, we have no fund. (MA29)</i>
<b>2.2 Economic organization</b>	<i>I believe that women are very supportive of one another. If you are in need of anything and are going to talk to someone, this woman will not deny help. I saw women and heard testimonies saying that because of the women's association they now have their money, they sell what they produce and now the money is theirs, they do not produce just to eat, they do it to sell too. Some were used to and saw no other way out, but to keep asking their husbands for money... I saw their testimonies saying that they were now capable and now they were independent - which is very gratifying. (MA5)</i>	<i>I learned from the women's association how to produce to sell, because before I used to produce only for our consumption and so now, I have an income. Within the association it is good because we understand each other and help each other by giving that strength to go and sale our products, but also to produce. (MA10)</i>	<i>For now, that's what we want, [an association], [...] but then we want to set up a micro company. But we are too young in these things to know how to manage, and just the three of us talking is easier, and we have the help of one person. She worked on a very old project here, she was a technician, nowadays she is supporting us, we talked to her, asked for help, and little by little we are learning how to manage an association! Because the associations here [...] often people don't know what to do, sometimes they are there, but they don't know what to do, nor do they understand. (MA31)</i>
<b>2.3 Social organization</b>	<i>If a neighbour says they will not sell their place, the big farmers will buy the farm next door, then the bees, the chickens will die [because of the agrottoxics] and the person will get angry and will end up selling it. [...] Then the poison reaches the person and what happens? They will move to the Santarém's periphery, but with that money, they are unable to buy a house [...], and the family has to return to the community or go to a more distant one, but the settlements have no road, no water, no school... (MA3)</i>	<i>Big producers are a problem because they have these machines because they want to plant more to sell more, so they devastate everything. The land that is worked with these tractors is more destroyed, and then all that we see happening outside, this whole environmental issue we will feel here too, floods and everything else or it will turn into a desert because there will be no more to produce. Because those who are leaving they sell very cheap and those who are entering buy a lot have a lot of money, and they use tractors to clean everything. (MA17)</i>	<i>They [small-scale men], they already have that capitalist vision, and they will do this [using the pesticide], because they will not bother and waste time like us [women], who work by hand and looking for other means, recipes to make our pesticides with leaves [...] Because when these stores start to sell this product, they try to induce men [to buy it] by saying: '-ah are you still using the hoe? Put the poison to kill the bush!' Our fights are also very much here if you can kill grass and savanna with this poison, what good will grown there? [Thinking about the pesticides] there is also the issue of the water, the river and everything... (MA32)</i>
<b>2.4 Ecological</b>	<i>What we [family] used to produce before were rice, coffee and beans, but after soy arrived many things became difficult to produce because when they [large-scale soy producers] prepare the land to plant and put pesticides, the insects that were there in that area they will flee to a place where there is no pesticide, and they'll end up eating everything. Therefore, when is the time to plant soy or corn, it isn't easy [fo us]... We tried for a while to plant rice and beans, but these crops are more sensitive to insects, cricket, beetles... (MA1)</i>	<i>We no longer have our birds. It was a lot of toucans, those red macaws, green macaws, parrot, the green piriquinhos... Around this time we could hear many birds singing, and the irapurú sang this time too, but listen... Today is just silence. [...] And bees too, it's hard, because this development puts poison everywhere and kills everything... For example, that avocado tree over there is full of flowers, when there were bees, there were a lot of bees there, and I got a lot of avocados, now I don't get much because there's not much bee to pollinate it. There were a lot of bees, and they used to make their house inside our house, we were afraid. (MA9)</i>	<i>We suffered a lot here, it is very hot, we are there on the farm and there is a lot of new plague that came, the mango this year, we sold very little, because it gave a lot of bugs, a kind of flying that attacks. There is a production that we cannot let everything die, the hoses, for example, are very large and it is all natural, we [women] do not deal with these pesticide things. (MA32)</i>



	<b>Rural Communities</b>	<b>Rural Settlement</b>	<b>Conservation Unit</b>
2.5 Challenges	<i>We have a case here, which is even in the public ministry, of a lady who was intoxicated by the pesticide. She was a farmer, but she was not the one who worked with the product, it was her husband, and she got it just from washing his clothes. She was diagnosed with blood poisoning, and it has even reached the liver. (MA1)</i>	<i>We must think about the well-being of everyone and respect our life, the life of nature because if we don't have this awareness, we will end up killing ourselves... It is important that people make this reflection and to have a new education, right? Educate ourselves so that we can live longer with our children, grandchildren, and great-grandchildren... Because if we think about this new lifestyle of these large-scale producers, who have more conditions than us, if everyone uses pesticides, who will survive afterwards? (MA20)</i>	<i>Now, look at her difficulties [MA30] with her husband [...] if he goes to work there on that side of the trails when he comes home, he will come back drunk... I also ignore a lot of things in my situation [at home], but in her situation, it is very difficult, she is a man and a woman at the same time! (MA29)</i>
2.5.1 Gender	<i>[...] many women have already managed to migrate to agroecology because in the community we hear many reports from women who have a lot of difficulties at home with their husbands and children about the use of pesticides. In agroecology, natural pesticides are always used to chase away insects, and it is not as strong as the chemicals ones. It has to go slowly, [...] women try to talk and convince their husbands to stop using this type of poison, but we have this difficulty here. (MA1)</i>	<i>In order to live the life of a rural worker, the woman must have the initiative to do things, for example, when the husband needs to leave, the woman takes care of the house. My mother worked as a teacher here, worked at home and as a teacher. The older children took care of the younger ones, in the morning when daddy went to the fields, she went to school. When she arrived in the afternoon, she went to the farm to help dad... But I think the woman always have initiative, I met many women who got together to help and weeding each other's fields, they were like a crowd of women to make crops, to plant and to harvest. (MA9)</i>	<i>I suffered a lot with my father when I was a child, we worked a lot for him, and he always drank a lot... Now he is sick, but he drank and fought with my mother and us a lot. God! I can't even say much because now, I have one like that too... But it's not cool when he comes home at evening, drunk cursing and shouting at my kids and me! He spends the day hanging around, drinking and doesn't do anything at home, he has no right to come home and say that! This happens to me, in the middle of the week... Wow, I'm inside the house with my kids, taking care of everything, I do everything, and I have to attend to him, put food on his plate, attend to him at night and listen all of that. (MA30)</i>
2.5.2 Territorial	<i>we also have this difficulty with geographic distance, the municipality is very large and [...] most of the municipality is rural, everything is very distant, and with this, there are several difficulties in trying to organize more the family farm movement; it comes the issue of infrastructure, transport... (MA1)</i>	<i>The distance and financial issues are a real problem, also the agribusiness. There is so much soy... There are also loggers who are invading everything, on the riverside, here in the BR and downtown. This Cargill is also a problem too, it is the one who buys soy from "sojeiros" (sojers) and which brings health problems because it has a lot of pesticides. They use it in soybeans and corn, and this poison causes a lot of diseases, many women die, people have respiratory problems, and also it's causing devastation to the environment. (MA14)</i>	<i>There are women who are on this side of soy [production] and who suffer a lot from the proximity of soy, but we are women who know how to do a little of everything [...] (MA32)</i>
2.5.3 Ecological	<i>[bee] we still have it, but it has decreased a lot. Here in Belterra was a pole of bees, but with this issue of agribusiness and poison, it killed a lot [of bees]. I [...] used to provide training in bee production, both here and in FLONA, then when it was on the day of the experiments, we visited the places that had many bee boxes, but a lot of boxes! Today these places only have empty boxes, these poor animals are going to graze around and they don't come back, they die with the poison. Here was the biggest honey maker here in the region, recognized and stuff; He had many boxes, a wonderful apiary and he even planted fruit trees to give flowers [for the bees], and today he has nothing else, and he is surrounded by soy. (MA3)</i>	<i>Big producers are a problem because they have these machines because they want to plant more to sell more, so they devastate everything. The land that is worked with these tractors is more destroyed, and then all that we see happening outside, this whole environmental issue we will feel here too, floods and everything else or it will turn into a desert because there will be no more to produce. Because those who are leaving they sell very cheap and those who are entering buy a lot have a lot of money, and they use tractors to clean everything. (MA17)</i>	<i>The cashew we used to plant more here and the good thing is that we use the cashew seed, but now it doesn't grow much anymore... A lot of them has died in my yard. (I: They also told me about the fish, which used to have a lot...) MA3: Yeah, in the past, the community was small, but the community is growing now, and there are also those who come fishing here in the community then it ends [the fish]. (I: And are the fishermen who come here to fish traditional?) MA31: No, they are not! They come with big boats, we don't even know them, they are fishing with trawls and everything, with a large mesh and catch a lot of fish. Even the wild animals that we had a lot before [we don't have anymore], but also after that big fire which ended with everything... (MA31)</i>

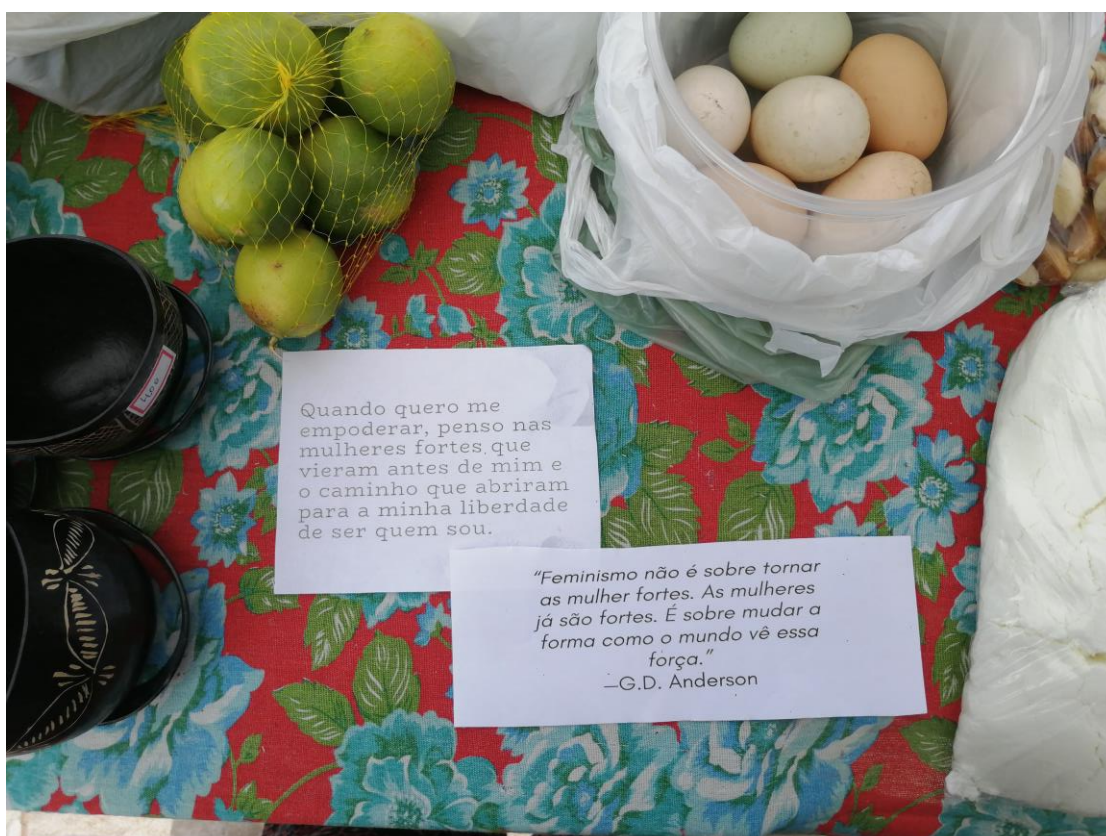


## Interpretation of the results review by the women

Themes and sub-themes	Description
2- Changes	<b>All types of changes</b>
Production	Changes in production to adapt women's lives to their multiple activities, for example, planting seedlings close to the house, or changes related to ecological or social changes, what to produce and how. Also, produce with diversity - looking for new recipes and ways to produce. It includes changes in response to the COVID19, for example, using more technologies (communication apps) for sales and the solidarity reorganization among women, which was observed at the end of the fieldwork.
Economical	Empowerment of women through economic independence; and the solidarity of women in their relationships, through mutual help is seen as positive. But there is also a change in the relationship with money, an increase of dependence on projects and an overvaluation of a different lifestyle - those are negative views.
Social	It includes the historical context and the impact of the expansion of soy and livestock production on social organization and its consequences, such as the immigration of large producers and the migration of farmers to cities and the increase in the use of pesticides also by small farmers. One positive thing is the growing repositioning of women within their families and communities, with more voice and recognition of their rights.
Ecological	There are fewer wild animals (also birds and bees), fish decreasing in size and quantity, higher temperatures, less rain, more insects, new diseases in production (such as in black pepper), reduced biodiversity, and forest.
2.1 Challenges	It includes direct and indirect challenges for women - which can be conflicts or just have a conflictual aspect.
<i>Gender</i>	It is a challenge to be a woman. There are many challenges between men and women in the family, in the fields and social movements. Also, the violence suffered by women in all aspects and places just because they are women.
<i>Territory</i>	It is a challenge to stay in their territories; there is a lot of pressure from the big producers of soy or cattle; communities lack infrastructure and distance is a big problem for sales and sometimes production.
<i>Ecological</i>	There are fewer wild animals (also birds and bees), fish decreasing in size and quantity, higher temperatures, less rain, more insects, new diseases in production (such as in black pepper), reduced biodiversity, and forest.

### 3. Hope

One of the findings' surprises was the element of hope, which clearly showed up in conversations with women. Women hope and act for a better future in their territories, but also in small things a hope in action and can see in photo 9, in which small feminist messages are left on the sale stands with the women's product for their consumers to pick them up. At all times and in all three regions when talking about domestic conflicts, challenges related to social movements, or large-scale producers - they manage to reverse their thinking by hoping that their situation will get better with "faith in God". There is hope for better days while they continue "doing their part", by "fighting", or "resisting" - words that are constant in the collaborators' narratives.



**Photo 9.** Translation of notes: *“When I want to empower myself, I think of the strong women who came before me and the path they opened for my freedom and for me to be who I am”.*

*“Feminism is not about making women strong. Women are already strong. It is about changing the way the world views this strength”, G.D. Anderson.*

Notes produced to be distributed at the FASE women's fairs in Santarém - a space dedicated only for women producers to sell (Taís González, 2020).

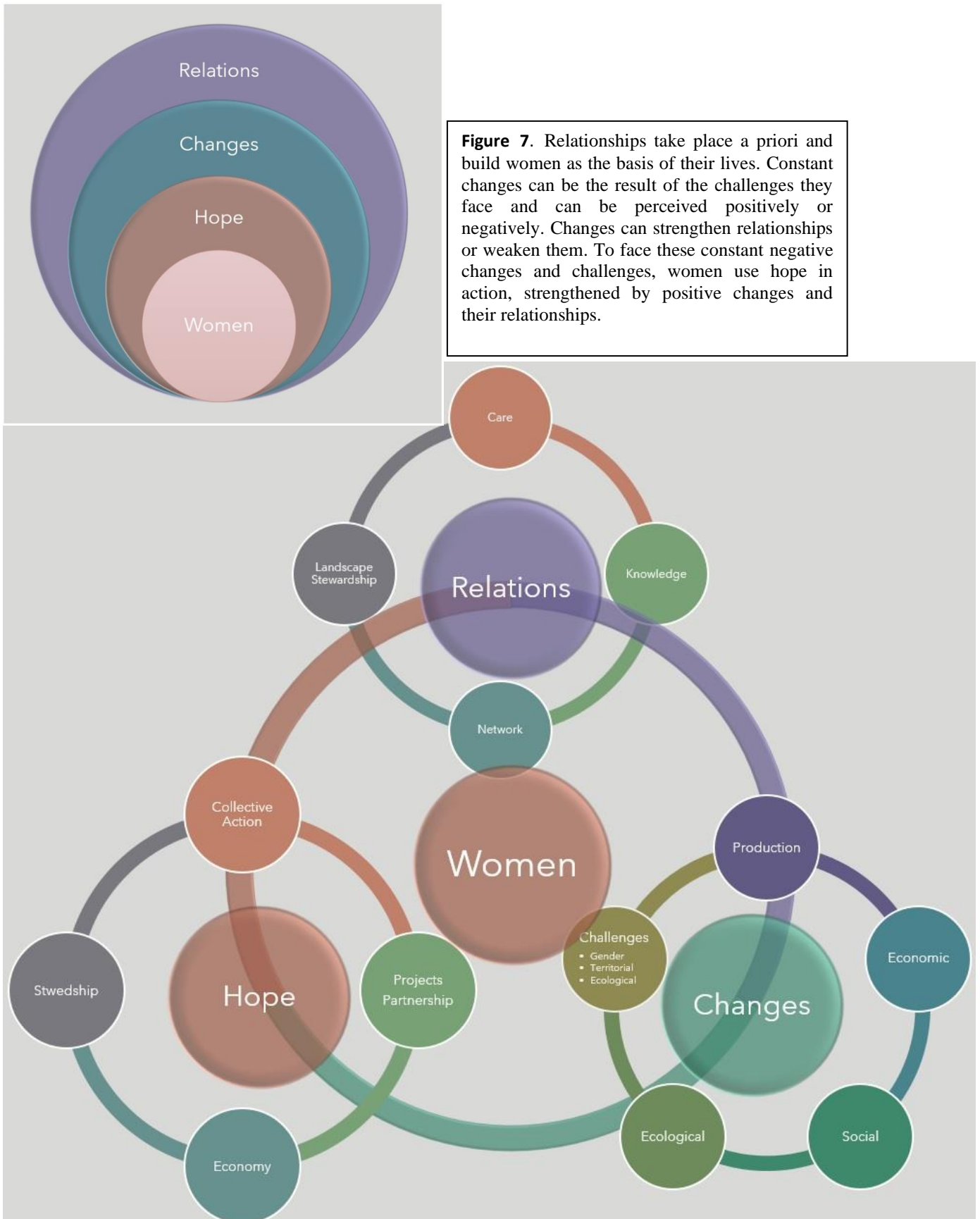


	<b>Rural Communities</b>	<b>Rural Settlement</b>	<b>Conservation Unit</b>
<b>3. Hopes</b>	<i>Our association would be good if we got together more, got together to make crafts that would teach each other for example [...] Because there are many women and one knows how to do one thing the other knows how to do one thing in a different way and so we could share the knowledge. [...] and spend the whole day together, and everyone could bring something, one brings a cake, other can bring another thing [...] I think it's cool, to exchange knowledge and help each other like that, we did it once [...] and I miss doing that. (MA6)</i>	<i>We try to do everything to not deforest, to produce on the same land without deforesting and try to conserve the forest, also to plant the fruits in a way that does not harm the environment. (MA10)</i>	<i>I really like it here and doing what I do and we have a hope of seeing things get better and better for us. To receive people interested to help us make other products with andiroba oil or other things... I always comment with my sisters that I don't want to give up on this easy like that. We still think about having a more beautiful shed to make the oil and that is our wish and we hope that we will still get our store too [...] but we will continue to be doing our little things (MA31)</i>
<b>3.1 Collective action</b>	<i>We think today of something to improve in the future, but we are also doing it today. For example, today we were meeting [in the women association] to discuss the vaccine for chicks and chickens and the idea of working with mineral feed has already arisen there. So, we are already thinking about other options, such as packaging for the sale of natural eggs, handmade packaging. Because women are like that, they want to do it and have the idea [...] and this is all innovative, all these things that happen, our way of thinking is innovative. (MA1)</i>	<i>One of the things that I think is important in a women's association is because of working in a group, we already had projects to work in a group, because we are here in the settlement [...], and so we get some women to be freer, they go out to meetings, they have the freedom to talk to the neighbours, they go out to sell their products... Before the men would not allow it, it was only them who could leave the house and bring money to the family, and the men decided everything and got the right to do things. And that is very good, getting women to break free, this is a transformation that I want to see. (MA17)</i>	<i>In the [women's] association, we are working hard with the creation of free-range chicken, although when we work with projects we often need to follow what is determined there, there is a lot of bureaucracy, but we [women] dream of breaking with this capitalist logic of having to do only what they want to buy! (MA32)</i>
<b>3.2 Access projects / Partnership</b>	<i>We have more contact with FASE and EMATER - they are with us a lot, every meeting, almost always there is one of them, I think it's important. Through EMATER, what we need we can ask them and they give support, they help in what they can, so I believe it is important to continue to shore up the women, to continue working together, because their support is so important! (MA4)</i>	<i>Now if there was a project for us to work with açai, for example, because here açai is strong, the pupunha too, but nothing... If MA14 managed to take her pupuna to Santarém to sell it there, it would be good, because the people there buy it a lot, but there is no way... We also don't have help from the government, and we are fighting right here, but at the end of the day, everything we produce here is only for consumption because we can't take it to sell in another place. (MA15)</i>	<i>We talked among ourselves and decided to be alone to organize correctly and do this andiroba project, and now we are slowly fixing it... Then we started doing it with our strength and there is a girl who is helping us to re-regulate our association and after one year, we can start paying taxes so we can write projects to help us. (MA30)</i>
<b>3.3 Economy</b>	<i>One strategy would be to sell cupuaçu seeds and there is this man who is looking to buy it and we would get a percentage on top of each chocolate bar [he want to produce with the cupuaçu seeds] so that he could sell the association's history and it would be a way to get more resources for the association and also for us, who is of it. (MA2)</i>	<i>So if there are more women participating, they will be able to sell at these fairs, so this will help women a lot in their self-support and stop asking for money from their husbands. [...] Our hope is that doors will be open so that the associates can sell their products and I have faith that if we get a bigger car, women here can participate more and sell their products at the fairs, in Santarém, in Alter do Chão and we want to start a fair in Belterra [...]. (MA20)</i>	<i>As we work with the production of oil, we want to plant more of that, and in the future, we can produce more. (MA29)</i>
<b>3.4 Stewardship</b>	<i>We have a different way of thinking, in reality those who want to earn a lot of money, spend a lot too, but I don't, if I earning enough for me is good. I could cut it all off and plant only one thing that I could make money, but I don't want to. I don't want to take all the wild tree, I don't want food just for myself, I want that the little bird and the little monkey to have their food too... I think that everyone has to eat. (MA2)</i>	<i>We see that there are people who live near these farms, this region is overtaken by it... We fight for one thing and another one comes and destroys everything... We see and hear many comments that there are many people who get sick from cancer, especially there in Mojuí and that's why. There, they work a lot with this type of poison - they are big, and we are very small... But as long as there is life we will be fighting, because we do not accept this, we want health and they want money, they do not care about anything. (MA7)</i>	<i>In my view of life it is like this, I produce a lot of gerimum (pumpkin) and I already donated a lot and there are neighbours who doesn't even want it anymore, we donate a lot, to our family too... And I tell the women if you can't get a space, plant a gherkin plant in the pot because we have to produce healthy food [...] Our fight here is for that too. How will women resist and occupy these spaces, telling the world that we are agroecological and produce without poison? (MA32)</i>

### Interpretation of the results review by the women

Themes and sub-themes	Description
<b>3- Hope</b>	<b>General desire to improve the lifestyle of women, which usually involves processes of resistance and faith. Something they are doing; hope is an action!</b>
Collective Action	The desire for a better organization in social movements, desire for more active and true participation of women to improve their productions and the lives of their families and communities, more transparency and better relationships within communities or groups (women/family farmers).
Projects / Partnership	Improve access to resources through public policies or social movements (associations and/or NGOs). More partnerships with universities, cooperatives and civil society as a whole.
Economy	More sales points and production valorisation.
Stewardship	The desire for greater care for nature (plot and forest) and alternative production practices without pesticides.

## Visual Representation of my main results





### Focus Groups Results

The focus group results have a considerable capacity to identify possible or desirable endogenous and exogenous changes in women's paths and to identify processes that are moving towards change. To think about a sustainable future, we start by thinking about what is not right and the challenges they face that somehow affect them and their work as farmers, described in the first box "Challenges". The collaborators from CU (**Photo 10.**) were more concerned about the communities' internal issues; while the collaborators from CR and CS (**Photo 11.**) identify the challenges presented by agribusiness and the lack of infrastructure as most significant.

The desired sustainable future - the words they used to describe what is sustainability from them was grouped with them in the three pillars of sustainability. The three themes present results with relational perspectives, in which women realise that they need these "themes" to survive and thrive. Lastly, from the first two reflections, they presented the future they wanted, the question that permeated was: "How can you contribute to building the future you want." – The future is centred on the strengthening of social relationships for them to exercise their work with farmers and/or their resistance by putting in practice what they can do for a better future.

The environment was pointed out as a concern directly connected to their life. They were responsible for taking care of the environment in which they live through the care of the forest (reforestation and garbage collection) and or "poison-free" agriculture. This is something they must do to be happy in the future.

The economy, despite having been the first reaction of the two groups (words that were spoken in the brainstorm was related to the economy, as "money" or "selling more"), this theme was not as developed and debated as the other two ones. Still, they want an economy that respects nature. While CU thinks of an economy totally related to nature through forest extractivism, the RC and RS think of an economy concerning nature through agroecology.



**Photo 10.** Focus group at CU.



**Photo 11.** Focus group with women from RC and RS.

<b>Desire Future from women's perspective</b>		
	<b>Conservation Unit</b>	<b>Rural Community &amp; Rural Settlement</b>
<b>Challenges</b>	Disunited community, disinterested young people, disinterested men to help women, small and local production of oils, lack of market and valorisation of the oils, food dependency, distance, lack of technical support for the vegetable garden, and health issues.	Lack of infrastructure, distance, agribusiness, poison (agrochemicals).
<b>Quotes</b>	<i>Older people they need young people a lot to pass things and to teach them, because if these people that are responsible for the community or the church suddenly die how will it be if no one know anything, who will run the community? (MA29)</i>	<i>Agribusiness devastated everything, but it is necessary to face them with our heads held high. (MA14)</i>
<b>Social Relations</b>	More respect, love, trust, honesty, responsibility, understanding, affection, dialogue (within families and community), understanding, transparency, communal participation, togetherness, faith, hope, courage, compassion, patience, determination, work, health, and will.	Persistence, resistance, win, hope, strength, communion between social movements, women's movement, and people.
<b>Quotes</b>	<i>What we must resolve here is the lack of unity, of conversation, of participation. I think that the lack of courage of people to participate makes technicians walk away from us. My contribution to the future of the community would be to talk and ask the members to have more courage to face the difficulties, as I have. And to have faith in God so that we can achieve better things for our community. It's necessary to have hope and faith in God that one day we'll make it! (MA30)</i>	<i>We need to prepare ourselves better to have better relationships. So that social groups and movements do not depart, that this doesn't happen again. For example, now, with the Corona19, we have to look for other ways to do things, together. Defending our territories together, because we, rural women, if we don't strengthen our base, we won't be able to overcome the challenges. (MA14)</i>
<b>Environment</b>	Less deforestation, less fires, more responsibility, joy, reforestation, take care of the animals, take care of garbage, and more environmental education.	Less deforestation, respect the environment, produce within agroecology, and pass this knowledge on to others, resist in the territories.
<b>Quotes</b>	<i>I say joy because if we do take care of the environment, in the future, we will smile with joy because we will have fulfilled your duty here and will live with joy (MA31)</i>	<i>In the future, we want to keep this nature alive, and it will depend on our respect for the environment and everything in it, to continue producing in agroecology and respecting mother nature, mother Earth, and taking this knowledge to other people. By resisting in our territory, we will be fighting to keep this nature alive in the future, producing real food and bringing healthy food to the city, which is what we are doing here today! (MA39)</i>
<b>Economy</b>	More paid work, more plant beds, have more fruit trees, participate in community associations, conscience, water, fish, and markets to sell medicinal plants.	Economy without deforestation and preserving nature, partnerships with associations, and public authorities to improve the economy.
<b>Quotes</b>	<i>For the future, we need to plant more to save more money. Here we buy everything, even chives, sweet pepper... If we planted even a small flowerbed, it would be an economy. We earn little money, then it gets tighter we must go to Santarém to buy things there. We already got used to making these little sachet bags juice, for example, it's faster and cheaper, but we have so much fruit here. So, I think we should talk more and change a little these habits that we acquired. (MA29)</i>	<i>Many people come here to Pará to deforest, and we don't want that. In the future we're the ones who will feel the impact of this deforestation - we're already feeling it, right? We must preserve because by preserving nature we can enjoy it. We women farmers plant and harvest with moderation, they don't. We are so small to fight them, but with willpower, we can achieve a lot. We want to continue to produce healthy food, and with more public help we could work in a less tiring way, but the government does not support us. (MA7)</i>



## Discussion

### **RQ1. What is the role of women in landscape stewardship practices in the Amazon?**

Women are fundamental in landscape stewardship practices, for that. This study presented that women carry an ancestral matriarchal knowledge, which greatly influences how they take care of the land and in their household activities. This specific knowledge is shared amongst women and can be exchanged and complemented by their networks and environment (Mellegård and Boonstra 2020). Women are considered to take better care of their family and their production plot, which differentiates what they do from what their partners or sons do – in that way, care is gendered. It is not in this essay's scope to understand if the care is a choice or not; this would be an invitation for further studies.

This brings to the surface two points of reflection: first, these women play a fundamental role in stewardship practices, and second, understanding this can be essential for understanding in-depth stewardship practices. First, as they perceive deforestation and the use of pesticides as harmful, they seek alternatives to care for the land, either by reforesting or through agroecological practices; they show a womenature (decolonial-process-relational) perspective to thinking about the solution as they understand it will be good for them in the future, but also, to understanding the problem. MA8 (RS) said, when she explained to me how the use of pesticide could be harmful to humans, “for you to see how strong this poison is, the earth itself cannot grow anything anymore there [where she put once the pesticide to kill grass]. Now can you imagine, how does it look inside a human being?”. Second, despite having been pointed out as something essential, money does not have equal importance with their lives and the lives of their families, which suggests that women could be more persistent on carrying out stewardship practices, even at a financial cost.

Traditional women are immersed in a vast network of relationships with where they live (nature, place, and the spiritual world), with their family, with other women and with their production (including medicinal plants and animals). These relationships, including are perceived as essential to resist in their territory, which can be framed as an ‘embodied’ connection, suggesting that humans are immersed in their environment mentally, materially and physically (Cooke et al. 2016) – this is particularly important in the case of women, that they build these connections not only for their social relationships but also as a survival strategy. Still, this is a foreign perspective, the process-relational perspective can here be compared to the decolonial understanding (indigenous and traditional) that “connections” are not an action between two entities, but rather an intrinsic existence - relationships form people and places. These relationships are also made of the spiritual world and the entities of the forest *os encantados* (the enchanted).

### **RQ2. How can these practices contribute in an innovative way to food diversity and biodiversity conservation in the region?**

In an environment of constant and perennial changes, innovating becomes a recurring action. The reconfiguration of products and elements of nature contributes to food diversity, which occurs mainly through the reconfiguration of nature elements such as the production of açai coffee, different types of cassava flour, breads, jams, juices, spices, among others. The collaborators usually experiment with new “formulas” in



the production of foods –as explained by MA14 (RS), “each one has their curiosity and knowledge; then we end up sharing our knowledge. A formula ends up, and everyone wants to test it! For example, I come and say look what I did, and I did it like that, and then the other one will do it. But each one also has its formula, and each one tests differently, too”.

These process of trial and error, evolution, relationships, and observance, is also seen within nature and not only contributes to food diversity but also the local biodiversity, which can be better understood with the process-relational perspective, as it brings the reasoning of causal agency (Garcia et al. 2020a) – women farmers are women because of their relations with the land. The landscape thus became such because of the relationship with itself, and with humans. As noted in Traditional Agricultural Systems (SAT), as the Rio Negro, in the Upper Amazon, which enriches the local biodiversity and its characteristic of co-adaptation between farmers and landscapes (Cunha 2014, Almeida and Udry 2019). Finally, changes in the landscape impacting traditional women’s lives and can have an impact on their production. Thus, they proactively seek alternatives to overcome the new challenges, mainly through their network of relationships.

### **RQ3. What are the processes that can facilitate or restrict women's individual or collective agency?**

Socioecological relationships have the potential to facilitate individual or collective agency of women, through the exchange of knowledge with their networks and their caring connections with the environment in which they are embedded. Challenges can restrict women’s agency and negatively impact their lives. For instance, the effect of the region’s migratory movement. The influx of large producers increases the pressure on the smaller ones to migrate to urban centres. This is perceived negatively by the older generation, whereas the new generation generally wants to move to cities.

The process-relational perspective allows a focus on the colonial processes, an ongoing influence, that is changing the landscape, their relations, and women’s lives. Women are living in ‘betweenness’, being oppressed but exerting their resistance (Anzaldúa, 1987) through the ‘embodied stewards’ acts’. Moreover, being a rural woman is a “political act” (Lugones 2010), that they are proud of, they recognise that they are an epistemic subject that coexistence with many worlds. Simultaneously, processes of cultural and ecological redefinitions are happening all the time in their territory. Women are fighting for individual rights and collective rights for family farming and their communities. It is not in this essay’s scope to analyse the depth, intensity and intentions of these actions and narratives.

Although decolonial advocates for reasoning that challenges the logic of hegemonic thinking of “dichotomous and hierarchical categories” (Lugones 2010:935), the relationship between the collaborators and their plants and animals suggests a hierarchy, while some plants are only for food and do not require much care, others, such as medicinal plants or ornamental plants have another important and need a “special care” and can be found around their houses. Agency, the capacity to autonomously make decisions and take actions is a dormant ability that can be triggered by self-organization (Davidson 2013, cited in Secco 2015). Relationships with other women and their “human”-network are fundamental to their agency and have the potential of strengthening their empowerment, which can occur through the

participation in social movements such as women's association, cooperatives, or unions. The increased participation of women inside their communities and social movements is something that Escobar (2017:16) called "as processes of 'matriarchalization'".

However, it is necessary to observe the asymmetry between worlds related to this environment of pressure and oppression. Even within agroecological fairs, there is a tendency for the individual capitalist way of thinking to override the principles of solidarity economy upheld by of these fairs, as MA12 said, "we have to be careful not to romanticize too much this cooperation between them [women] because it will be lost at some point. For example, here at the fair, what we are reinforcing this year are the principles of solidarity economy, this fair has a political stamp, we are the resistance! We are not here at the fair just to sell products, but also to be a space for the family farming to show itself." Furthermore, competition between women and the replication of forms of power, in addition to the political and impractical use of agroecology, also follows this same logic. Even under the impacts of modernity and hegemonic socio-economic processes, these peoples maintain their cultural and spiritual practices associated with natural landscapes (Merçon et al. 2019). This can also be seen through their "hope in action" from a noun to verb (Hertz et al. 2020), the desired future that includes the stewardship of nature and social relations is happening also now and influences their agency (what they do and why). Therefore, a fundamental attribute that contributes to facilitating women's agency is the very condition of hope, which is essential for them to act and resist in their territories.

### **What can we learn from them?**

The most recent women's movements have been heavily involved in political reflections on the almost impossible decoupling of decolonization from the "depatriarchalization" of thought, knowledge, and structures (Verschuur and Destremau 2012). For this reason, the movements, relations, and practices of women in the region play a fundamental role in resisting ideological, political, economic, environmental and social orders linked to the commodification of land, food and nature, in addition to challenging traditional social roles. Offering new possibilities and hope for a possible future, starting today. On the question of hope and its importance, Freire (1992:105-106) once wrote about his relationship with one of his students, "it [hope] increased my responsibility because I realized that, in my hope, he was seeking support for his. What he may not have known is that I needed him as much as he needed me. The struggle for hope is permanent, and it becomes intensified when one realizes it is not a solitary struggle".

From the results of focus groups, women also showed that they could contribute to a sustainable future by resisting and "doing their part". Thinking in a decolonial-process-relational way about socioecological relations can illuminate how the Amazon Forest has shaped these women and how these women have shaped the Amazon Forest for thousands of years. Thus, if we think that women are today in a state of "between" in this movement of "becoming" which, in this context means resistance from their practices, it can be said that the Amazon Forest experiences this same process. The Amazon Forest is "betweenness" and is "becoming" something; however, the "becoming" of the Amazon Forest may indicate its savanization (Lovejoy and Nobre 2019).

### **Methodological and ethical reflections**

This essay is based on the self-assessment of traditional rural women, which can entail uncertainty in the results. As Zylstra et al. (2014) show, there is a fundamental uncertainty in self-report measures. This is to be kept in mind when looking at the results, especially regarding stewardship desires for the future. At the same time, there were many reports of women saying that their partners use a type of pesticide (such as killing grass or mata-mato), or using the social movements as a tool to access social projects, others said that, despite identifying themselves as farmers, they do not live primarily off agriculture anymore. This reflects their “betweenness” situation but requires a deeper reflection on women’s searching for autonomy in a place where “brutal forms of extractive globalization are being resisted” (Escobar 2018:16).

Following the positioning of the Anzaldúa (1987) borderlands, I move between worlds - also needing to build bridges that serve as home and community for me, an onto-epistemology of empathy, embodied thinking and thinking with resistance (Lugones 2010), or as Borda and Moncayo (2009) theorize, a “sentipensiente” (felt and think at the same time. This is not to say that mestiza reflects the myth of authentic cultures, which in reality never existed Jean-Loup Amselle (2008 cited in Mignolo and Escobar 2008), but instead reaffirming that this is a natural process of “becoming”, in where people can find their “betweenness” identity.

From a decolonial point of view, my positioning affects all aspects of the research process, so I made use of a critical reflection to locate myself in the field to explore the nature of my relationship with the collaborators and address the dynamics of identity politics and my position in the field (Manning 2018). The critical reflection approach places me at the centre of this analysis. However, the “I” goes around a collective self of racialized Latin American women, an attempt to not just to include their voices in my essay, but to make this essay the very result of the fusion of this process of learning – also part of a PAR (Borda 1987). The critical reflection approach puts me at the centre of the analysis, which may clash with scientific standards. Nevertheless, this is a feminist writing stance based on relationality rather than substantiality, in which it is a praxis not just in feminist studies (Neuman 2007), but also to the “approach to the otherness at the heart of postcolonial or decolonial ethics” (Verschuur and Destremau 2012:9).

This is essay is based on collaborators views and voices an attempt for a more faithful interpretation possible was made. Therefore, constant changes were necessary. My initial conceptualization revolved around knowledge, women's self-determination (initially thinking of indigenous peoples, more than traditional ones), and innovation. However, as explained later, they desired to expose the challenges, practices, and hope that the future will be better for them, so my conceptualization also evolved. Finally, the practice of critical reflection, in which there is no hierarchy of interdependence, also includes the Amazon Forest as an entity, who participates in this relational onto-epistemological thinking by being the reason of the study.

## *Conclusions*

In a setting dominated by pressure and oppression, where large-scale farmers are leading economic, environmental, and social changes, inequalities are being perpetuated. Thus, identification and understanding of the womenature's role to guarantee food and biocultural diversity are imperative in a world of constant changes and face of eminent jeopardies of the Amazon forest. This study showed further the importance of women and their knowledge for landscape stewardship in the Amazon, which can lead to an in-depth understanding of this concept. Furthermore, even under the impacts of modernity and hegemonic socio-economic processes of change, these women maintain their cultural and spiritual practices associated with nature, which can be seen through their "hope in action" – the desired future that includes the stewardship and social relations – happening now.

All the entangled processes of actions and reactions represent the relational life of these womenature, with the care as the core of their "betweenness"; therefore, studies that address gender issues in landscape stewardship are necessary. Other recommendations for further studies would be a feminist approach to critically reflect on why care is considered a feminine characteristic, which would be fundamental to redirect stewardship studies in similar contexts. Finally, if the characteristic of the Amazon's constitution is intrinsic with the existence of human beings, non-humans, spiritual beings and the forest, what would mean the absence of one of these elements? The social tipping point of the Amazon Forest is inseparable from Her ecological tipping point and vice versa.

## Literature cited

Acosta, A. 2013. Extractivism and neoextractivism: two sides of the same curse. *Beyond development: alternative visions from Latin America*, 1:61-86.

Acosta, A. 2017. Post-extractivism: From discourse to practice—reflections for action. In *Alternative Pathways to Sustainable Development: Lessons from Latin America*. 77-101. Brill Nijhoff.

Alexander, D. E. 2013. Resilience and disaster risk reduction: an etymological journey. *Natural Hazards & Earth System Sciences*, 13(11).

Almeida, J., and Udry, M. 2019. Sistemas agrícolas tradicionais no Brasil. *Área de Informação da Sede-Livro científico (ALICE)*.

Ambesange Praveen, V. 2016. Postcolonialism: Edward Said & Gayatri Spivak. *Research Journal of Recent Sciences*.

Andersson, K., Benavides, J.P., and León, R. 2014. Institutional Diversity and Local Forest Governance. *Environmental Science and Policy* 36:61-72.

Anzaldúa, G. 1987. *Borderlands: the new mestiza*. Aunt Lute Books.

Barrantes-Montero, L. G. 2018. Phillipson's linguistic imperialism revisited at the light of Latin American decoloniality approach. *Revista Electrónica Educare*, 22(1):1-19.

Bennett, N.J., Whitty, T.S., Finkbeiner, E., Pittman, J., Bassett, H., Gelcich, S. And Allison, E.H. 2018. Environmental stewardship: a conceptual review and analytical framework. *Environmental Management*, 61(4):597-614.

Berkes, F., Folke, C., and Colding, J. (eds.) 2000. *Linking social and ecological systems: management practices and social mechanisms for building resilience*. Cambridge University Press.

Bieling, C., and Plieninger, T. (eds.) 2017. *The science and practice of landscape stewardship*. Cambridge University Press.

Borda, O. F. 1987. The application of participatory action-research in Latin America. *International sociology*, 2(4):329-347.

Borda, O. F. 1991. Some basic ingredients. *Action and knowledge: Breaking the monopoly with participatory action research*, 3-12.

Borda, O. F., and Mora-Osejo, L.E. 2007. Beyond Eurocentrism: Systematic Knowledge in a Tropical Context. A Manifesto. *Cognitive Justice in a Global World: Prudent Knowledges for a Decent Life*.

Borda, O.F., and Moncayo, V.M. 2009. *Una sociología sentipensante para América Latina*. Siglo del hombre.



Boyatzis, R.E. 1998. *Transforming qualitative information: Thematic analysis and code development*. Sage.

Brondízio, E. S. 2008. The Amazonian Caboclo and the Açaí palm: Forest Farmers in the Global Market.” New York: New York Botanical Garden Press. 402.

Bull, J. 2016. Illdisciplined Gender: Nature/Culture and Transgressive Encounters. In *Illdisciplined Gender*. Springer, Cham: 1-9.

Cerqueira, D. (coord) 2019. ATLAS da Violência. Brasília, Brasil.

Colares da Mota-Neto, J. 2018. Paulo Freire y Orlando Fals Borda en la genealogía de la pedagogía decolonial latinoamericana. *Folios*, (48):3-13.

Cockburn, J., Cundill, G., Shackleton, S., and Rouget, M. 2018. Towards place-based research to support social–ecological stewardship. *Sustainability*, 10(5):1434.

Cockburn, J., Rosenberg, E., Copteros, A., Cornelius, S.F.A., Libala, N., Metcalfe, L., and van der Waal, B. 2020. A relational approach to landscape stewardship: Towards a new perspective for multi-actor collaboration. *Land*, 9(7):224.

Cortes, J. P. S. D., Coudel, E., Piraux, M., Silva, M. P. D., Santos, B. A. D., Folhes, R., and Silva, R. G. P. D. 2020. Quais as perspectivas da agricultura familiar em um contexto de expansão do agronegócio? Zoneamento participativo com representantes comunitários do Planalto Santareno. *Confins. Revue franco-brésilienne de géographie/Revista franco-brasileira de geografia*, (45).

Cooke, B., West, S., and Boonstra, W.J. 2016. Dwelling in the biosphere: exploring an embodied human–environment connection in resilience thinking. *Sustainability Science*, 11(5):831-843.

Cunha, M. C. (ed.) 2014. *Políticas culturais e povos indígenas: uma introdução*. Políticas Culturais e povos indígenas. São Paulo: Cultura Acadêmica. São Paulo, Brasil.

De Castro, F., Hogenboom, B., and Baud, M. (eds.) 2016. Environmental Governance in Latin America. Hampshire, UK: *Palgrave MacMillan*.

Delgado, G.C., and Bergamasco, S.M.P.P. 2017. Agricultura familiar brasileira: desafios e perspectivas de futuro. *Brasília: Ministério do Desenvolvimento Agrário*. Brasília, Brasil.

dos Santos Calaçã, M. K. A., Conte, I. I., and Cinelli, C. 2018. Feminismo camponês e popular: uma história de construções coletivas. *Revista Brasileira de Educação do Campo*, 3(4):1156-1183.

DuBois, W.E.B. 1986. The souls of black folk. *WEB DuBois: Writings*,357-547.  
Escobar, A. 2017. Response: Design for/by [and from] the ‘global South.’. *Design Philosophy Papers*, 15(1):39-49.

Escobar, A. 2018. *Designs for the pluriverse: Radical interdependence, autonomy, and the making of worlds*. Duke University Press.

Fanon, F. 2008. *Black skin, white masks*. Grove press.

FAO. 2014. *State of food insecurity in the world*. Food and Agriculture Organization of the United Nations. Rome, Italy.

FAO. 2017. *The future of food and agriculture – Trends and challenges*. Rome, Italy.

Foucault, M., 1980. *Power/knowledge: Selected interviews and other writings, 1972-1977*. Vintage.

Futemma, C., De Castro, F., and Brondizio, E.S. 2020. Farmers and Social Innovations in Rural Development: Collaborative Arrangements in Eastern Brazilian Amazon. *Land Use Policy*, 99:104999.

Freire, P., and Ara, A.M. 1998. *Pedagogy of the heart*. Bloomsbury Publishing USA.

Freire, P. 1970. *Pedagogy of the oppressed*. Bloomsbury publishing USA.

Galeano, E. 1997. *Open veins of Latin America: Five centuries of the pillage of a continent*. NYU Press.

Garner, E., and de la O Campos, A. P. 2014. Identifying the “family farm”: an informal discussion of the concepts and definitions. ESA Working Paper No. 14-10. Rome, FAO.

Gomes, T.D.V., Cardoso, A.C.D., Coelho, H.S., and Oliveira, K.D. 2017. Santarém (PA): um caso de espaço metropolitano sob múltiplas determinações. *Cadernos MetrÓpole*, 19(40):891-918.

Grosfoguel, R. 2008. Para descolonizar os estudos de economia política e os estudos pós-coloniais: transmodernidade, pensamento de fronteira e colonialidade global. *Revista crítica de ciências sociais*, (80):115-147.

Healey-Etten, V., and Sharp, S. 2010. ‘Teaching Beginning Undergraduates How to Do an In-depth Interview: A Teaching Note with 12 Handy Tips’, *Teaching Sociology*, 38(2):157–165.

Hertz, T. and García, M. M. 2019. *Know your Ologies - Toolkit for cross-disciplinary Research*. Stockholm, Sweden.

Hertz, T., Garcia, M. M., and Schlüter, M. 2020. From nouns to verbs: How process Ontologies enhance our understanding of social-ecological systems understood as complex adaptive systems. *People and Nature*, 2(2):328-338.

Karam, K. F. 2004. A mulher na agricultura orgânica e em novas ruralidades. Universidade Federal de Santa Catarina. *Estudos Feministas*, Florianópolis, 12(1):360.

Kate Sierzputowski, 2019. *Head Instructor: A New Glass Sculpture by Thomas Medicus Analyzes the Human Mind Through Four Anamorphic Images*. Colossal, viewed 16 August 2020, <<https://www.thisiscolossal.com/2019/01/head-instructor-by-thomas-medicus/>>

Krenak, A. 2019. *Ideias para adiar o fim do mundo*. Editora Companhia das Letras. São Paulo, Brasil.

Kvale, S. 1996. *InterViews: an introduction to qualitative research interviewing*. Sage.

Leal, V. N. 2012. *Coronelismo, enxada e voto: o município e o regime representativo no Brasil*. Editora Companhia das Letras. São Paulo, Brasil.

Lovejoy, T. E., and Nobre, C. 2019. Winds of will: Tipping change in the Amazon. *Sci. Adv.* 5, eaba2949.

Lugones, M. 2010. Toward a decolonial feminism. *Hypatia*, 25(4):742-759.

Mancilla Garcia, M., Hertz, T., and Schlüter, M. 2020. Towards a Process Epistemology for the Analysis of Social-Ecological System. *Environmental Values*, 29(2):221-239.

Manning, J. 2018. Becoming a decolonial feminist ethnographer: Addressing the complexities of positionality and representation. *Management Learning*, 49(3):311-326.

McKay, B. M. 2017. Agrarian extractivism in Bolivia. *World Development*, 97:199-211.

Mellegård, V. and Boonstra, W.J., 2020. Craftsmanship as a carrier of indigenous and local ecological knowledge: photographic insights from Sámi Duodji and archipelago fishing. *Society & Natural Resources*, 1-21.

Merçon, J., Vetter, S., Tengö, M., Cocks, M., Balvanera, P., Rosell, J.A., and Ayala-Orozco, B. 2019. From local landscapes to international policy: contributions of the biocultural paradigm to global sustainability. *Global Sustainability*, 2.

Mignolo, W. D. 2009. Epistemic disobedience, independent thought and decolonial freedom. *Theory, Culture & Society*, 26(7-8):159-181.

Mignolo, W.D., and Escobar, A. (eds.) 2013. *Globalization and the decolonial option*. Routledge.

Millwood, J., and Heath, M. R. 2000. Food choice by older people: the use of semi-structured interviews with open and closed questions. *Gerodontology*, 17(1):25-32.

Moser, A., and Korstjens, I. 2018. Series: Practical guidance to qualitative research. Part 3: Sampling, data collection and analysis. *European Journal of General Practice*, 24(1):9-18.

Murdock, E. G. 2018. Unsettling reconciliation: Decolonial methods for transforming social-ecological systems. *Environmental Values*, 27(5):513-533.

Neuman, L.W. 2007. *Social research methods*, 6/E. Pearson Education India.

Nobre, C. A., and Borma, L. D. S. 2009. 'Tipping points' for the Amazon forest. *Current Opinion in Environmental Sustainability*, 1(1):28-36.

Nobre, C. A., Sampaio, G., Borma, L. S., Castilla-Rubio, J. C., Silva, J. S., and Cardoso, M. 2016. Land-use and climate change risks in the Amazon and the need of a novel sustainable development paradigm. *Proceedings of the National Academy of Sciences*, 113(39):10759-10768.

Paredes, J. 2008. Hilando fino desde el feminismo comunitario. Comunidad mujeres creando comunidad, La Paz, Bolivia.[Recuperado: 5 de enero de 2017].

Pereira, J.C.M. 2012. Os modos de vida na cidade: Belterra, um estudo de caso na Amazônia brasileira. Universidade Do Rio de Janeiro, Rio de Janeiro, Brasil.

Phillipson, R. 2007. Linguistic imperialism: a conspiracy, or a conspiracy of silence?. *Language policy*, 6(3-4):377-383.

Phillipson, R. 2008. The linguistic imperialism of neoliberal empire. *Critical inquiry in language studies*, 5(1):1-43.

Phillipson, R. 2012. Linguistic imperialism. *The encyclopedia of applied linguistics*, 1-7.

Quijano, A. 2000. Coloniality of power and Eurocentrism in Latin America. *International Sociology*, 15(2):215-232.

Raftopoulos, M. 2017. Contemporary debates on social-environmental conflicts, extractivism and human rights in Latin America. *Journal The International Journal of Human Rights*, 21(4):387-404.

Rajão, R., Soares-Filho, B., Nunes, F., Börner, J., Machado, L., Assis, D., Oliveira, A., Pinto, L., Ribeiro, V., Rausch, L., and Gibbs, H. 2020. The rotten apples of Brazil's agribusiness. *Science*, 369(6501):246-248.

Ross, E. 2017. Amazon rainforest was shaped by an ancient hunger for fruits and nuts. *Nature News*, Springer Nature, (3):2.

Scharmer, O. 2018. *The essentials of theory U: Core principles and applications*. Berrett-Koehler Publishers. Oakland, CA, USA.

Seco Pérez, C. 2015. Sumak Kawsay: Listening to the voices of the Living Forest: Resilience and Identity for Indigenous peoples in the Ecuadorian Amazon.

Smith, L. T. 1997. *Decolonizing methodologies: Research and indigenous peoples*. Zed Books Ltd. New Zealand.

Sober, E. 2020. *Core questions in philosophy: A text with readings*. Routledge.

SOFA Team and C. Doss. 2011. The role of women in agriculture. ESA Working Paper No. 11-02, Agricultural Development Economics Division of the Food and Agriculture Organization of the United Nations, Rome, Italy.

Stenseke, M. 2018. Connecting 'relational values' and relational landscape approaches. *Current opinion in environmental sustainability*, 35:82-88.

Tlostanova, M. 2019. The postcolonial condition, the decolonial option, and the post-socialist intervention. *Cross-Examined*, 165.

van Hoek, R., Aronsson, H., Kovács, G., and Spens, K. M. 2005. Abductive reasoning in logistics research. *International journal of physical distribution & logistics management*. 35(2):132-144.

Van Nes, F., Abma, T., Jonsson, H., and Deeg, D. 2010. Language differences in qualitative research: is meaning lost in translation?. *European journal of ageing*, 7(4):313-316.

Verschuur, C., and Destremau, B. 2012. Féminismes décoloniaux, genre et développement. *Revue Tiers Monde*, (1):7-18.

Walker, D. A. 2009. Biofuels, facts, fantasy, and feasibility. *Journal of Applied Phycology*, 21:509–517.

Wilkinson, S. 1998. Focus group methodology: a review. *International journal of social research methodology*, 1(3):181-203.

Wilson, E., and Stammler, F. 2016. Beyond extractivism and alternative cosmologies: Arctic communities and extractive industries in uncertain times. *The Extractive Industries and Society*, 3(1):1-8.

Wu, J. G. 2013. Landscape sustainability science: Ecosystem services and human well-being in changing landscapes. *Landscape Ecology*, (28):999-1023.

Yin, R. K. 2009. *Case study research: Design and methods* (4 ed.). Los Angeles, CA: Sage

Yin, R. K. 2013. Validity and generalization in future case study evaluations. *Evaluation*, 19(3):321-332.

Zylstra, M.J., Knight, A.T., Esler, K.J., and Le Grange, L.L. 2014. Connectedness as a core conservation concern: An interdisciplinary review of theory and a call for practice. *Springer Science Reviews*, 2(1-2):119-143.



## *Annexes*

### **Interview Guide**

Briefly (re)explain the project and the purpose of the interview - Read PLS and after Consent Form signed. Time of interview - approximately 45 minutes.

#### **Key Informants (stakeholders, project partners, social movements' leaders, etc):**

1. Tell me about yourself. How are you involved in issues related to land use and land use change? [planning, regulations, agriculture, conservation work, etc.]
2. Considering your experience, would you recognize innovative actions / aspects led by women that occur in the region where you work? Could you list them?
  - 2.1 For each innovative action / aspect you have listed:
    - 2.1.1 Why are you innovative? / interesting / important / new
    - 2.1.2 How would you describe it? Why was it created, what are the context and conditions that led to it?
    - 2.1.3 Where it was designed and its scale (please provide details of the locations).
    - 2.1.4 How do you see the role of women and the knowledge of women in these innovative practices?
3. What is the potential role that women's knowledge could play in land use and / or livelihoods?
4. What are the important platforms to support these initiatives?
5. Why are these platforms important?
6. What is the role of contact networks among women?
7. What are the ways to support these networks and what additional activities might be needed?
8. In the examples you gave, what are the challenges encountered?
  - 8.1 How have these challenges been or are they being overcome?
  - 8.2 What can be the strategies to overcome them.
9. What are the factors that can facilitate these initiatives and women's innovations?
10. What is the role of women's biocultural knowledge and its connections in creating innovative practices?
  - 10.1 What could this develop and grow?
11. What is the transformative aspect of women's practices?
12. Would you like to add any information, data or points that I did not mention?

## **Collaborators**

1. Tell me about yourself. What are your main activities / practices that you engage with?

1.1 How often do you get involved in each one of them?

1.2 How did you learn about these activities?

1.3 Do you consider these activities a sustainable livelihood? Why?

1.4 Why do you perform these activities?

1.5 What are the traditional values involved / redeemed in the activity (ies) you do?

1.6 What practices did you perform previously? Have you change something in the way you produce?

2. How do you see the role of women's knowledge in these practices?

2.1 In these activities, does it matter that you and your colleagues are women? How and why? What does a woman accomplish differently from a man? How is the work of women different from the men?

2.2 What is the difference from a women's association to a mixed association?

3. What do you think are (are) the actions and/or the innovative aspects in what you do?

3.1 Why is this innovative (for you)? New / important / interesting?

3.2 How would you describe this? Why was it created, what are the context and conditions that led to it?

4. What is the transformative aspect of these practices?

5. What are the conditions that can facilitate or restrict your agency or the women' agency for effective participation in these practices?

5.1 What strategies are you using to overcome these challenges?

5.2 How is the issue of geographic distribution for you? Does this, in any way, facilitate your participation in social movements or not? And in your own production/sale? What about access to public policies?

6. What is the role of women's connections and platforms in creating their contribution to sustainability (or for you in general)?

7. Would you like to add some information, data or points that I did not mention and it is important for you? Or do you have any question?

## **Guia da entrevista**

**Informantes-chave** (partes interessadas, parceiros do projeto, líderes de movimentos sociais, etc.):

(Re)explicar resumidamente o projeto e o objetivo da entrevista (PLS) – Assine o Termo de Consentimento. Tempo da entrevista - aproximadamente 45 minutos.

1. Conte-me sobre você. Como você está envolvido em questões relacionadas ao uso e à mudança do uso da terra? [planejamento, regulamentos, agricultura, trabalho pela conservação, etc.]
2. Considerando sua experiência, você reconheceria ações/aspectos inovadores liderados por mulheres que ocorrem na região na qual você trabalha? Você poderia listá-los?
  - 2.1 Para cada ação/aspecto inovador que você listou:
    - 2.1.1 Por que é inovador? / interessante / importante / novo
    - 2.1.2 Como você o descreveria? Por que foi criado, quais são o contexto e as condições que levaram a isso?
    - 2.1.3 Onde foi concebido e qual a sua escala (forneça detalhes dos locais).
    - 2.1.4 Como você vê o papel da mulher e o conhecimento das mulheres nessas práticas inovadoras?
3. Qual é o papel potencial que o conhecimento das mulheres poderia desempenhar no uso da terra e/ou meios de subsistência?
4. Quais são as plataformas importantes para apoiar essas iniciativas?
5. Por que essas plataformas são importantes?
6. Qual é o papel das redes de contato entre as mulheres?
7. Quais são as formas de apoiar essas redes e quais são as atividades adicionais que poderiam ser necessárias?
8. Nos exemplos que você deu, quais são os desafios encontrados?
  - 8.1 Como esses desafios foram ou estão sendo superados?
  - 8.2 Quais podem ser as estratégias para superá-los.
9. Quais são os fatores que podem facilitar essas iniciativas e as inovações das mulheres?
10. Qual é o papel do conhecimento tradicional das mulheres e suas conexões para a criação de práticas inovativas?

- 10.1 Qual isso poderia se desenvolver e crescer?
11. Qual é o aspecto transformador das práticas das mulheres?
12. Você gostaria de adicionar alguma informação, dados ou pontos que eu não mencionei?

### **Guia da entrevista - Colaboradoras**

(Re)explicar resumidamente o projeto e o objetivo da entrevista (PLS) – Assine o Termo de Consentimento. Tempo da entrevista - aproximadamente 45 minutos.

1. Conte-me sobre você. Quais são as principais atividades/práticas que você se envolve em relação à floresta, agricultura, produção de alimentos?
  - 1.1 Com que frequência você se envolve em cada uma delas?
  - 1.2 Como você aprendeu sobre essas atividades?
  - 1.3 Você considera essas atividades meios de subsistência sustentáveis? Por quê?
  - 1.4 Porque você realiza essas atividades?
  - 1.5 Quais são os valores tradicionais envolvidos / resgatados na(s) atividade(s) que você faz?
  - 1.6 Quais práticas vocês realizava anteriormente?
2. Como você vê o papel do conhecimento das mulheres nessas práticas?
  - 2.1 Nestas atividades, importa que você e seus colegas sejam mulheres? Como e por quê? O que a mulher realiza diferente do homem? Como a produção da mulher é diferente da produção do homem?
  - 2.2 Qual a diferença de uma associação só de mulheres para uma associação mista ou só de homens?
3. O que você acha que é (são) as ações e/ou os aspectos inovadores no que você faz?
  - 3.1 Por que isso é inovador (para você)? Novo / importante / interessante
  - 3.2 Como você descreveria isso? Por que isso foi criado, quais são o contexto e as condições que levaram a isso?
4. Qual é o aspecto transformativo dessas práticas?
5. Quais são as condições que podem facilitar ou restringir sua agência ou a agência da associação para uma participação efetiva nessas práticas?
  - 5.1 Quais são as estratégias que você está usando para superar esses desafios?
  - 5.2 Como é a questão da distribuição geográfica para você? Isso, de alguma forma, facilita ou não a sua participação nos movimentos sociais? E na sua própria produção/venda? E no acesso de políticas públicas?
6. Qual é o papel das conexões e plataformas das mulheres na criação da contribuição delas para a sustentabilidade?
7. Você gostaria de adicionar algumas informações, dados ou pontos que eu não mencionei e que são importantes para você? – Ou você tem alguma pergunta?



## Plain Language Statement

Project initial title: *Women, Knowledge, and Innovation for sustainability - the circle of reconciliation in the Amazon*

Main researcher: Taís Sonetti González

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Supervisors: Maria Tengö, Wijnand Boonstra and Jamila Haider

Responsible in Brazil: Daiana C. M. Tourne – [monteiro.dca@gmail.com](mailto:monteiro.dca@gmail.com) (19) 97143-4522

Social-Ecological Resilience for Sustainable Development at Stockholm Resilience Centre, Stockholm University

You are being invited to take part in a research study. Before you decide it is important you understand why the research is being done and what it will involve. Please ask if anything is not clear or if you would like more information.

Forest degradation in the Amazon contrasts with a range of individual and collective sustainable production practices developed by local agents, known as “pieces of solutions”. These initiatives have the potential to reconcile conservation and local development goals such as quality of life, conservation, and more inclusive economic development. The aim of the project is to assess individual and collective promising transformation practices of land-use in the Amazon, from the extractive model to a more sustainable land-use practices. But how does women is contributing to be “pieces of solutions” for biodiversity and biocultural diversity conservation? To find out I would like to spend some time with you, in your work/fields and your home over the next days.

I would like to audio-record some of our conversations is that ok with you? Any information you provide me will be used only without your name Results.

Rural women relate in their daily lives with the environment (place) where they live, but also with their family, with other women, and with their production (including medicinal plants and animals). Still, they are not only an active entity, they are also passive and witnesses of the relationships that occur around them. Therefore, they are part of a network that relate and act, human-environment, human-human, human-nature, environment-human, nature-human, and nature-nature. Relationships are fundamental to their lives and their survival.

Landscape practices are interconnected with women's presence in their territory and contribute to the conservation of the region's biodiversity and biocultural. How they produce, reveal this. The innovation also promotes a new diversity of products and care for the land.

Knowing their characteristics and differences of rural women in farming reveals their importance and it is part of environmental justice, equity in the landscape, it also promotes SDG 5, and indicates how conservation can occur.

Networks were indicated as essential for the agency and resistance of women in their territory

Knowledge systems were identified as fundamental to the agency, resistance and innovation of women in their territories. The practice of knowledge exchange is commonplace and essential for biocultural and biodiversity conservation.

Challenges restrict women's action, but it also drives them to action. However, challenges make the action and situation of traditional women more vulnerable, thus weakening their resilience.

Changes can both facilitate or restrict women's agency

General desires for improvement of their lifestyle which often involves resistance processes and faith - Talking about their hopes is to collectively imagine a possible future and particularly important for the transformation of governance in the Amazon. Hope is also an active element happening right now.

I have chosen to speak with you because I am interested in your vision of your work and what you do here. I will be very happy if you would like to collaborate in the thesis. I have interviewed other people in the community (fairs/associations), as well as in (name other communities). You are free to decide whether or not to take part and can choose to withdraw at any point.

This study is independent from any non-governmental organisation operating in the region, local government or political party/views. I will be in the area during February and May conducting this research.

You can reach me for follow-up questions at +46 76 22 51 759 (WhatsApp) If you have any concerns about the way the project is carried out, please contact the ethics review team at Stockholm Resilience Centre: Dr. Tim Daw ([tim.daw@su.se](mailto:tim.daw@su.se)) or Dra. Maria Mancilla García ([maria.mgarcia@su.se](mailto:maria.mgarcia@su.se)), or locally general manager of the project.

Thank you!

### **Portuguese version**

Título inicial do projeto: Mulheres, conhecimento e inovação para a sustentabilidade - o círculo de reconciliação na Amazônia

Pesquisador principal: Taís Sonetti González

CONTATO: +46 76 22 51 759 (WhatsApp) ou [tatasgonzalez@gmail.com](mailto:tatasgonzalez@gmail.com)

Supervisores: Maria Tengö, Wijnand Boonstra e Jamila Haider

Responsável no Brasil: Daiana C. M. Tourne – [monteiro.dca@gmail.com](mailto:monteiro.dca@gmail.com) (19) 97143-4522

Curso de mestrado: Resiliência socioecológica para o desenvolvimento sustentável - Centro de Resiliência de Estocolmo, Universidade de Estocolmo.

Você está sendo convidado a participar de uma pesquisa. Antes de decidir, é importante entender por que a pesquisa está sendo feita e o que ela envolverá. Por favor, pergunte se algo não está claro ou se você deseja obter mais informações.

A degradação florestal na Amazônia contrasta com uma série de práticas de produção sustentável individual e coletiva, desenvolvidas por agentes locais, conhecidas como “peças de soluções”. Essas iniciativas têm o potencial de conciliar objetivos de conservação e desenvolvimento local, como qualidade de vida, conservação e desenvolvimento econômico mais inclusivo. O objetivo do projeto é avaliar práticas de transformação promissoras individuais e coletivas de uso da terra na Amazônia, desde o modelo extrativo até práticas mais sustentáveis de uso da terra. Mas como as mulheres estão contribuindo para serem “soluções” para a conservação da biodiversidade e da diversidade biocultural? Para descobrir, gostaria de passar algum tempo com você, em seu trabalho / campo e em sua casa nos próximos dias.

Eu gostaria de gravar algumas de nossas conversas(a nossa entrevista). Tudo bem com você? Qualquer informação que você me fornecer será usada sem o seu nome e a gravação de áudio original será excluída assim que for transcrita. Decidi falar com você porque estou interessado em sua visão de seu trabalho e o que você faz aqui. Ficarei muito feliz se você quiser colaborar na tese. Tenho entrevistas outras pessoas na comunidade (feiras / associações), bem como em (nomear outras comunidades). Você é livre para decidir se quer participar ou não e pode desistir a qualquer momento.

Este estudo é independente de qualquer organização não governamental operando na região, governo local ou partes / pontos de vista políticos. Estarei na área durante os meses de fevereiro e maio conduzindo esta pesquisa.

Você pode entrar em contato comigo para perguntas de acompanhamento em +46 76 22 51 759 (WhatsApp) Se tiver alguma dúvida sobre a forma como o projeto é realizado, entre em contato com a equipe de revisão de ética no Centro de Resiliência de Estocolmo: Dr. Tim Daw ([tim.daw@su.se](mailto:tim.daw@su.se)) ou Dra. Maria Mancilla García ([maria.mgarcia@su.se](mailto:maria.mgarcia@su.se)), ou gerente geral local do projeto.

Obrigada!

## Consent form

**Research project:** Women, Knowledge, and Innovation for sustainability - the circle of reconciliation in the Amazon

You are being asked to take part in a research study that aims to assess individual and collective practices of land-use in the Amazon, from the extractive model to a more sustainable land-use practices.

- **What the study is about:** This project is for research purposes only. The research project aims to identify the "pieces of solutions" from Amazonian and facilitated their empowerment towards a greater agency and participation in the transformative process of a sustainable and inclusive landscape governance.

- **What we expect from you:** With your permission, we would like to record the interview.

- **Risks and benefits:** We do not anticipate any risks to you participating in this study other than those encountered in day-to-day life. There are no benefits to you for participating.

- **Confidentiality:** The records of this study belong to Stockholm University and the confidentiality of respondents are protected by Swedish laws through the Public Access to Information and Secrecy Act (SFS2009:400). Names of participants are not recorded, instead the interview transcripts use a randomized ID number. Any reports or publications will therefore include neither your name nor your role in your group. However, the name of your organization or community will be used. All information will be securely stored, and only researchers involved in the project will have access to it. Records will be archived anonymously.

- **Voluntary participation:** Your participation is completely voluntary. You may skip whatever questions you do not want to answer, and you are free to withdraw at any time.

- We might use exact quotes from our interview, but these will never be linked to your identity.

- This interview will contribute to a scientific research project. The results of this research will be published and freely available so that anyone will be able to access them.

- You will have access to a summary of the results in your language, which will be available online and physically, and will be sent it to you if you agree to give your contact details.

- Any information that could be considered against the law is of your entire responsibility and the confidentiality of this interview does not imply legal privileges.



The researcher conducting this study is Taís González ([tatasgonzalez@gmail.com](mailto:tatasgonzalez@gmail.com) +46 762251759), supervised by Dr. Maria Tengö ([maria.tengo@su.se](mailto:maria.tengo@su.se) +46 734604910), and co-supervised by Wijnand Boonstra and Jamila Haider - affiliated with Stockholm Resilience Centre at Stockholm University, Sweden. The research ethics for this study have been reviewed by my supervisor and the SRC Director of studies according to the guidelines of the SRC research ethics committee. If you have any concerns about the way the project is carried out, please contact the heads of the SRC Ethics Committee: Dr. Tim Daw ([tim.daw@su.se](mailto:tim.daw@su.se)) or Dra. Maria Mancilla García ([maria.mgarcia@su.se](mailto:maria.mgarcia@su.se)).

**Statement of consent:** I have read the above information and have received answers to any questions I asked. I consent to take part in the study.

Participant

name: \_\_\_\_\_

Participant signature:

\_\_\_\_\_

Local and

Date: \_\_\_\_\_

Researcher name:

\_\_\_\_\_

Research

signature: \_\_\_\_\_

Local and

Date: \_\_\_\_\_

The consent form will be kept by the researchers for at least three years beyond the end of the study. You will be given a copy of this form to keep for your records

### **Portuguese Version**

**Projeto de pesquisa:** Mulheres, conhecimento e inovação para a sustentabilidade - o círculo de reconciliação na Amazônia

Você está sendo convidado a participar de uma pesquisa que visa avaliar práticas individuais e coletivas de uso da terra na Amazônia, desde o modelo extrativo até práticas mais sustentáveis de uso da terra.

- **Sobre o que é o estudo:** Este projeto é apenas para fins de pesquisa. O projeto de pesquisa tem como objetivo identificar as "soluções" da Amazônia e facilitar seu

empoderamento para uma maior agência e participação no processo transformador de uma governança paisagística sustentável e inclusiva.

- **O que esperamos de você:** com sua permissão, gostaríamos de gravar a entrevista.
- **Riscos e benefícios:** Não prevemos nenhum risco para você participar deste estudo, além dos encontrados no dia-a-dia. Não há benefícios para você por participar.
- **Confidencialidade:** os registros deste estudo pertencem à Universidade de Estocolmo e a confidencialidade dos entrevistados é protegida pelas leis suecas por meio da Lei de Acesso Público à Informação e Sigilo (SFS2009: 400). Os nomes dos participantes não são gravados; as transcrições da entrevista usam um número de identificação aleatório. Portanto, quaisquer relatórios ou publicações não incluirão seu nome nem sua função em seu grupo. No entanto, o nome da sua organização ou comunidade será usado. Todas as informações serão armazenadas com segurança e somente os pesquisadores envolvidos no projeto terão acesso a elas. Os registros serão arquivados anonimamente.
- **Participação voluntária:** sua participação é completamente voluntária. Você pode não precisa responder as perguntas que não deseja responder e pode retirar-se da pesquisa a qualquer momento.
- Podemos usar citações exatas de nossa entrevista, mas elas nunca serão vinculadas à sua identidade.
- Esta entrevista contribuirá para um projeto de pesquisa científica. Os resultados desta pesquisa serão publicados e disponibilizados gratuitamente, para que qualquer pessoa possa acessá-los.
- Você terá acesso a um resumo dos resultados em seu idioma, que estará disponível on-line e que será enviado a você se você concordar em fornecer o seu contato.
- Qualquer informação que possa ser considerada ilegal é de sua inteira responsabilidade e a confidencialidade desta entrevista não implica privilégios legais.

A pesquisadora que conduz este estudo é Taís González ([tatasgonzalez@gmail.com](mailto:tatasgonzalez@gmail.com) +46 762251759), supervisionada pela Dra. Maria Tengö ([maria.tengo@su.se](mailto:maria.tengo@su.se) +46 734604910) e co-supervisionada por Wijnand Boonstra e Jamila Haider – afiliados com o Stockholm Resilience Center da Universidade de Estocolmo, Suécia. A ética em pesquisa deste estudo foi revisada pelo meu supervisor e pelo diretor de estudos da SRC, de acordo com as diretrizes do comitê de ética em pesquisa da SRC. Se você tiver alguma dúvida sobre como o projeto é realizado, entre em contato com os chefes do Comitê de Ética do SRC: Dr. Tim Daw ([tim.daw@su.se](mailto:tim.daw@su.se)) ou Dra. Maria Mancilla García ([maria.mgarcia@su.se](mailto:maria.mgarcia@su.se)). Responsável no Brasil: Daiana C. M. Tourne – [monteiro.dca@gmail.com](mailto:monteiro.dca@gmail.com) (19) 97143-4522

Declaração de consentimento: Li as informações acima e recebi respostas para todas as perguntas que fiz. Autorizo participar do estudo.

Nome dx participante: \_\_\_\_\_

Assinatura dx participant: \_\_\_\_\_

Nome da Pesquisadora: \_\_\_\_\_

Assinatura da pesquisadora: \_\_\_\_\_

Local e Data: \_\_\_\_\_

O termo de consentimento será mantido pelos pesquisadores por pelo menos três anos após o final do estudo. Você receberá uma cópia deste formulário para guardar em seus registros

### **AGENTS Project**

My master's thesis is part of the AGENTS - Governance of the Amazon project to enable transformations for sustainability - a collaborative research action funded by the NORFACE program - Belmont Forum Transformations to Sustainability (T2S) (2018-2021), composed of six partner organizations from the Brazil, USA, The Netherlands and Sweden. AGENTS is based on a participatory, comparative and multi-scale perspective, and combines social sciences, forest sciences and spatial analysis. Although government-led solutions are commonly seen as the path to development, a wide variety of sustainable forestry practices in the Amazon emerge from individual and collective initiatives and can be considered "solutions" to protect and govern biodiversity and landscapes in areas selected in the Brazilian, Peruvian and Bolivian Amazon. The project aims to contribute as methodological and analytical tools to catalyse the recognition of existing but often dispersed basic practices. I intend to contribute to the AGENTS project by exploring the knowledge systems of traditional women in Belterra and their possible role in innovative solutions that can contribute to the conservation of the region's biodiversity and bioculture. On the other hand, the AGENTS project will provide spatial information from the areas where initiatives from traditional women were identified in this research. Since, the landscape analysis associated to focus group and interviews can strongly contribute to highlight evidence on historical and recent transformation.



## Detailed Interpreted Results in Portuguese

<u>Temas e subtemas</u>	<u>Descrição</u>
<b>1. Relações</b>	<b>As são agricultoras porque trabalham com a terra. Elas tem uma outra maneira de se relacionar com o meio ambiente (local) em que vivem, com sua família, com outras mulheres e pessoas de sua rede de contatos e com a sua produção (incluindo plantas medicinais e animais). Elas são também testemunhas dos relacionamentos que ocorrem na natureza e as mudanças que ocorrem na natureza.</b>
<u>Cuidado</u>	As mulheres cuidam mais de suas famílias e de suas produções, seja na agricultura ou no cuidado com os animais (principalmente os animais pequenos como galinhas e porcos) – a mulher é mais cuidadosa do que o homem
<u>Conhecimento</u>	Os relacionamentos também ocorrem através do conhecimento e seu intercâmbio, aprendizado e ensino. Além de seus conhecimentos empíricos da lida na roça e na casa (muitas vezes aprendido com as mães) elas adquiriram conhecimento com o contato com técnicos e professores, amigos e/ou vizinhos, mas também no meio ambiente, observando o desenvolvimento de plantas, animais e de suas produções
Network (Associação de Mulheres e outros movimentos sociais)	A participação das mulheres nas associações de mulheres tem sua importância porque elas trabalham com as agendas das mulheres, elas sentem mais liberdade, confiança e alegria em estar entre mulheres. Entretanto, há muitas dificuldades e desafios dentro da associação de mulheres. Outros movimentos sociais incluem os sindicatos, ONGs e o papel das Igrejas na vida das mulheres
Práticas de cuidado com o uso da terra	As mulheres dizem e agem para cuidar e restaurar a terra através da agroecologia, ou agrofloresta ou resgate de conhecimentos tradicionais como as sementes crioulas.
<b>2. Mudanças</b>	<b>Todos os tipos de alterações relatadas</b>
<u>Organização de produção</u>	Mudanças na produção para adaptar a vida das mulheres às suas múltiplas atividades, por exemplo, plantar mudas perto da casa, realizar duas ou mais tarefas ao mesmo tempo (ir ao terreno e levar a roupa com elas) ou fazer pasto para alugar. Também inclui mudanças em resposta à crise do COVID19, por exemplo, o uso mais frequente de tecnologias (aplicativos de comunicação) para vendas e a reorganização solidária entre mulheres.
<u>Organização Econômica</u>	Empoderamento das mulheres através da independência econômica; e a solidariedade das mulheres em suas relações econômicas, através das trocas e ajuda mútua – visto como algo positivo. Mas tem também uma mudança na relação com o dinheiro, o aumento de dependência de projetos e a supervalorização de estilos de vida diferentes – estes são pontos negativos.
<u>Organização Social</u>	Inclui o contexto histórico e o impacto da expansão da produção de soja e gado na organização social e suas consequências, como a imigração de grandes produtores e a migração de agricultores para as cidades, além do aumento do uso de pesticidas também por pequenos agricultores. Uma coisa positiva é o crescente re-posicionamento das mulheres dentro de suas famílias e comunidades, com mais voz e reconhecimento de seus direitos
Percepção sobre o meio ambiente	Há menos animais selvagens (também pássaros e abelhas), peixes diminuindo o tamanho e quantidade, temperaturas mais altas, menos chuva, mais insetos, novas doenças na produção (como o que ocorreu na pimenta-do-reino), diminuição da biodiversidade e da floresta.
<u>2.1 Desafios</u>	<b>Inclui desafios diretos e indiretos para as mulheres - que podem ser conflitos ou apenas terem um aspecto conflituoso.</b>
<u>Gênero</u>	É um desafio ser mulher. Há muitos desafios entre homens e mulheres na família, na roça e nos movimentos sociais. Também a violência sofrida pelas mulheres em todos os aspectos e lugares só pelo fato delas serem mulheres.
<u>Território</u>	É um desafio permanecer em seus territórios, tem muita pressão dos grandes produtores de soja ou gado; falta infra-estrutura nas comunidades e a distância é um problema grande para venda e algumas vezes produção.
<u>Ecológico</u>	Alterações no clima, verões mais quentes, menos chuvas, menos caça, menos peixes, floresta desmatada, aumento de pragas e insetos.

<b>3. Esperanças</b>	<b>Desejos gerais de melhorar em seu estilo de vida, que geralmente envolvem processos de resistência e fé. Algo que elas realizam hoje, a esperança é uma ação!</b>
<u>Ação coletiva</u>	Desejo de uma melhor organização nos movimentos sociais, desejo de uma participação das mulheres pelo fato de elas quererem melhorar suas produções e vidas de sua família e comunidades, desejo de mais transparência e melhor relacionamento dentro das comunidades ou grupos (mulheres / agricultores familiares).
<u>Cuidado com a terra</u>	O desejo de maior cuidado à natureza (campo e floresta) e práticas alternativas de produção sem veneno.
<u>Tecnologia</u>	Mecanismos de melhorias tecnológicas ligadas a terra (como tratores) e comunicação (internet)
<u>Mercados</u>	Mais pontos de vendas e valorização da produção do campo
<u>Acesso a projetos</u>	Melhorar o acesso a recursos por meio de políticas públicas ou movimentos sociais (associações e / ou ONGs)
<u>Parcerias</u>	Mais parcerias com universidades, cooperativas estabilizadas e sociedade civil como um todo.

## Ethical Review – final review

I am happy with the results of my thesis since I was able to carry it out in a respectful, inclusive, and collaborative way with the women I encountered. I am pleased with the fact that they approved the results, and according to the comments, it faithfully portrayed their life and struggles. However, during my fieldwork, I faced many challenges, as it is usual in a long period of doing fieldwork. I lived together with my collaborators; hence, I found myself many times in the middle of the day-to-day life of people's normal relationships that include fights, disputes, side conversations, etc. It was challenging to get around of some situations such as the power struggle between some women, associations, institutions, etc. - who included myself as part of that power, for example, in which house I would stay, or which association would "get more of me"... I tried my best to divide my time among them and try to be with women who were not part of the association's board or who were not part of any association at all, for example. I also tried not to express any judgment or express opinions on the conduct or possible misconduct of the collaborators or express comments with political or gender bias that could be misinterpreted.

I did find in narratives a way of that. For example, if there were a fight in the home or community, especially involving a drunk man, many would come to me (knowing my research topic) to know about my position and my thoughts about what happened. Obviously, in a hot climate culture like the Brazilian, if you say that you are impartial, you would not be seen with "good eyes", in reality, you will be understood as a snob or as someone who is not empathetic to the difficulties of others. I then talked about my own experiences, for example, having grown up with an alcoholic father. I realized that being who I am is a choice that needs to be also exposed while doing research - in a strategic way, though. In my culture, this presents itself as a way of showing that we are equal, that everyone has their struggles and what we need is to respect and show solidarity, which can be done in many ways.

