Multi-epistemic and pluriversal hybrid contexts: Actors' narratives and discourses about the Brazilian Amazon Land and Forest

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This thesis is based on three scientific articles – one published article, one accepted article and one manuscript in preparation – as presented in Chapters 6 to 8 (Section II):

Tello, C., & Neuburger, M. (2023). Pluriverse in science: Discourses of Amazonian land-use change and socio-environmental (in)justice. ERDKUNDE. https://doi.org/10.3112/erdkunde.2023.04.02

Tello, C., & Neuburger, M. The role of social and traditional media in the Amazon forest: in search of pluriversal discourses (in preparation) (Intended journal: Environmental Sociology)

Tello, C. et al., (2023). Rural producers' discourses on the Brazilian Agricultural Frontier: between local and external narratives on land and forest. (accepted) DIE ERDE.

To facilitate the reader, the thesis has undergone renumbering of all headings, figures, and tables in a sequential order. Furthermore, standardization has been applied to abbreviations and citation styles, consolidating them in the references provided in Section IV.

Content

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Preface

This thesis is constructed in a pluriversal and multi-epistemic Latin American context. Therefore, this is an invitation for readers to be open to a different kind of interaction within this thesis, as many images and QR codes are distributed throughout the chapters. These images and QR codes are intended to take the reader to places, sounds, thoughts, and video-music that serve to navigate the topic differently. The images, photos and QR codes have an intended meaning; however, these are open for readers to make their own personal interpretations. The sounds � are Amazon forest borrowed abstractions of time and places collected in my field trip to Novo Progresso, Brazil; some of the video music 🔊 embedded is part of a small selection of pluriversal approaches. In addition, many images part of the outline of this thesis 👨‍🎓 are Rieke Lenz's production through collaborative thinking. These images represent the intersecting and entangling (many times chaotic) pluriverserses. Finally, the photos displayed were taken during my field trip to Novo Progresso, Brazil. This thesis is intended to extend the traditional scientific output towards a pluriversal journey through different ways of constructing knowledge, feelings, emotions, and personal interactions.

This thesis means more than an academic process since it integrates more than four years of personal growth, allowing me to evolve ideas and thoughts. Ultimately, as Drexler (2022) explains, for an individual creative process, many things are needed, among them ink and time.

"What I leave in writing
It is not carved in granite
I barely let loose in the wind,
presentiments.
I ask for what I need
ink and time, ink and time."
Tinta y Tiempo, Jorge Drexler, 2022
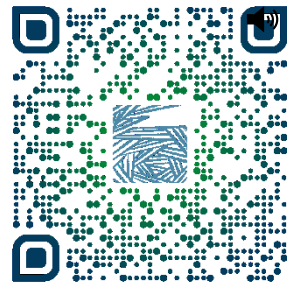
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SECTION I
INTRODUCTION

1   Research field & interest

Colonialism has profoundly impacted Latin America. It has legitimized power hierarchies, controlled knowledge production, established socio-political, environmental and economic colonial discourses, and established Western cultural norms as dominant (Quijano, 2000). Based on a dualistic view of nature and humans, these colonial dynamics have led to their objectification and exploitation. This mindset, along with scientific and racial theories, has shaped many social, political, economic, and environmental aspects of the region (Haesbaert, 2021; Machado Aráoz, 2010). The colonial worldview has created a specific way of seeing the world as "universal," resulting in historical inequities and injustices and forming the basis for "modernity" and "rationality" (Machado Aráoz, 2010; Quijano, 2000).

To counteract coloniality, pluriversal thinking emerged within de- and post-colonial thinking as a response to the limitations and critiques of Western universalising perspectives (Escobar, 2003, p. 57; Querejazu, 2016). It also engages in deconstructing Western "modernity", challenging the linear and definitive narratives of "progress" and "development". Similarly, engage in a critique of Eurocentric perspectives and knowledge systems, questioning the imposition of Western norms, values, and ways of knowing as "universal" and "one-worlders" and highlighting the modern model's limitations and biases (Querejazu, 2016; Quijano, 2000). The pluriverse concept brings pragmatic, socio-ecological, economic, and political alternatives to the "universal" world (Kothari et al., 2019). Hence, within the pluriverse, the "universal" and "one-worlder" thinking does not fit entirely into what the world should be like, although it should be part of the conversation between the many/pluri-universes.

The pluriverse is a consequence of mainly non-academic contexts in Latin America, such as Andean *campesines*, Zapatistas, and Afrocolumbian Movements (Escobar, 2016). However, scholars use the pluriverse in many fields and fronts, particularly those that involve human-nature relationships. Both, scholars and non-scholars have approached pluriversal thinking to criticise the "universal world" but also to explore, acknowledge, and validate alternative ontologies, epistemologies and knowledge traditions marginalised or suppressed by colonial powers (Escobar, 2016; Leff, 2017; Mignolo, 2007; Querejazu, 2016). This includes the acknowledgements of indigenous knowledge, non-Western non/academic philosophies, local and traditional ways of understanding reality, and the human, natural, and spiritual world (Querejazu, 2016). Also, academics from different fields (e.g. anthropology, geography, law, psychology, political sciences, and sociology) have (tried to) incorporate an intersectional and multi-epistemic approach, recognising the interconnectedness of various social categories such as race, gender, class, and ethnicity (Kothari et al., 2019; W. Mignolo, 2007). This aims to understand how different forms of oppression intersect and influence one another and seeks to create mutual learning and understanding spaces, fostering more inclusive and equitable pluriversal spaces (Escobar, 2016; Querejazu, 2016).

The pluriverse, as a formalized thinking, does not have a specific starting date and place, but its ideas can be traced back to social movements in the 1970s. However, it was widespread in academic discussions in the 1990s and early 2000s (Kothari et al., 2019, p. XXX). Since then, apart from criticising the "universal" and "modern" "one-world view", the pluriverse has been used as a means to re/present other ways of perceiving the world while seeking social and environmental justice and giving space and voices to structurally marginalised, exploited and oppressed people and communities (Kothari et al., 2019, p. XXX). During the last decades, it has spread from Latin America to all over the world, collecting and recognising other worlds (ways), mainly from the South globe. Also, it has been used as a tool in discussions to strengthen social movements' fights (e.g. landless and Zapatistas movements and ecofeminism, etc.), promote other socio-economic and ecologic ways and transformative initiatives (e.g. alternative currencies and traditional ecological knowledge), of perceiving (feeling) nature and the world (e.g.

Sentipensar, queerlove, *kyosei* and Ubuntu) and other ways of knowledge re/production (e.g. sea ontology and artography), among many others.

Moreover, academic Latin American debates on the pluriverse often focus on awareness or use examples of populations perceived as detached from the "universal world". This means that everything that seems (highly) distant from the universal world is more often explored and documented. Many studies are based on indigenous and traditional communities (e.g. Andino communities, quilombolas, extractive communities). However, for example, the percentage of non-traditional or indigenous communities (e.g. mestizos in rural and urban areas) in Latin America is much higher than groups where pluriverses are more often studied and identified. These intersecting hybrid contexts might be "closer" to the "one world view" but engage and get entangled daily with other (pluriversal) ways and knowledges. Therefore, this thesis postulates that intersecting hybrid contexts that have evolved or grown under the universal world paradigm may also possess alternative ways of seeing the world and perceiving their environment (e.g. relation towards land, forest, and water, different from materialistic). This perspective broadens the scope of the pluriverse concept, suggesting that diverse epistemologies and ontologies exist among contexts raised in "modernity", thus extending the relevance of the pluriverse beyond its traditional associations.

Based on these interests and questions, this thesis reinforces pluriversal thinking by approaching the Brazilian Amazon region. This region is one of those places where de/post/colonial and coloniality, "modernity," and "development" practices and discourses are entangled with socio-environmental dynamics. It is a region where contemporary global, political, and scientific debates are intensely focused on urgent climate and socio-environmental issues. The growing concern for preserving the Amazon has been leading to the proliferation of discourses that often present partial and simplified realities of the region. These discourses frequently depict the Amazon and its inhabitants as a place of homogenous socio-environmental dynamics (Tello & Neuburger, 2023). In the pursuit of conservation and "development," many of these narratives keep replicating colonial thoughts, adopting top-down perspectives that deny or overlook the region's heterogeneity and the voices of its inhabitants. Such approaches, closely linked to capitalist control, shape power relations in local communities, denying

the opportunity to articulate other knowledges and share perceptions of their realities and lived experiences (Meneses & Bidaseca, 2018, p. 12).

This thesis explores the application of the pluriverse concept within discourses related to the socio-environmental dynamics and intersecting hybrid contexts of the Brazilian Amazon within the topic of land and forest. It seeks to uncover these narratives' multi-faceted and pluriversal nature by analysing various sources, including social media, traditional media, scientific discourse, and empirical data from local stakeholders. Extending conventional scientific boundaries, this research endeavours to understand the diverse perspectives and voices often marginalised in mainstream discussions about Amazon's socio-environmental challenges.

Employing a decolonial and pluriversal lens, this thesis scrutinizes these discourses' structural and social contexts to avoid the romanticization that frequently infiltrates narratives about the region. The goal is to foster an unbiased, critical, and holistic analysis of the discourses and local dynamics at play. By focusing on those groups where pluriverse thinking has not looked deeper, this research underscores the necessity of recognising and amplifying the voices unheard in discussions about the socio-environmental dynamics of the forest and land in the Brazilian Amazon. Through this approach, the thesis contributes to a deeper understanding of the region's complex realities and diverse traditional and new knowledge systems.

2 Chapter outline & objectives

The overall objective of this thesis is to contribute to the pluriverse in intersecting hybrid contexts. It aims to broaden the understanding of the pluriverse by suggesting that pluriverses may exist in intersecting hybrid contexts, navigating multiple cultural influences and the one-world view. This research results from a progressive process of learning, deconstruction, and personal positioning, in which perspectives and points of view are constantly developed and challenged by the interlinkages between theory and practice. Pluriverses, like this research, are part of processes of intersectionalities and entanglements with life, research, people and worldviews. This process is manifested in this thesis, particularly in the publications starting from a discourse analysis perspective in science, then the analysis of discourses in social and traditional media, and finally, deepening in an in situ analysis of local narratives of hybrid contexts within the pluriverse.

The research finds pluriverses in Europe-centered, Westernized and Brazilian academic discourses; it found pluriverse in the social and traditional media discourses; finally, the pluriversal hybrid contexts narratives of rural producers, a community interacting with the universal world, give an overview of another pluriversal world. All these pluriverses are part of and contribute to the Brazilian Amazon forest discourses, issues, challenges, and dynamics.

To fulfil the main objective and fill the research gap (Chapter 3.3 D)), this research contemplates a leading and four sub-questions:

In the pluriverse context, how do intersecting hybrid contexts navigate their unique position between traditional and modern, local and global influences, and how do their narratives and experiences contribute to this exploration?

Sub-questions:

1) Do hierarchies in scientific knowledge production contribute to silencing subaltern voices and hiding a pluriverse approach when writing about Amazonia land issues? And if so, how? (Chapter 6, article 1)

2) What are the socio-environmental discourses about Pará's Amazon forest in social media and newspapers? How are they configured? And, which voices are heard and excluded? (Chapter 7, article 2)

3) How do rural producers' historical and present positioning and narratives shape land use and management on the agricultural frontier in Novo Progresso? (Chapter 8, article 3)

The research gap is identified in Chapter 3.3 D)

Section I presents the pluriverse concept. The various historical contexts and conceptual perspectives are explained in order to make the diversity of conceptual approaches visible, address the background of the study, and understand the research gap the thesis wants to fill. To set the conceptual basis, Chapter 3 presents the concepts and frameworks to approach the pluriverse. It explores the difference between colonialism and coloniality to deepen the understanding of the Western and Eurocentric sense of Modernity and the challenging de- and postcolonial thinking. This background aids in the introduction to the pluriverse in Latin America. It first presents the historical traces of the pluriverse, showing the grassroots and indigenous movements, such as the Zapatistas, Andean campesines and the Afro-Colombian communities, to finally engage with the feminist thinking from Abya Yala. Finally, it displays the scholars' interactions with the pluriverse and the current discussion in Brazil about the pluriverse, as well as its implications, applications, and critics.

Chapter 4 explains discursive entanglements in the Brazilian Amazon, where the shifting discourses about marginalised groups in the region are presented. The discoursive implications of groups and movements such as the *seringeires*, the MST and the Indigenous are discussed.

To explore the background of the study, Chapter 5 presents the CLICCS project and its implications for the work in the Amazon region. Then, the regions of the Brazilian Amazon, the state of Pará and the Municipality of Novo Progresso are presented. In this area, the selection of regions is justified. Furthermore, each method is presented to fulfil the main objective: the systematic literature review,

social and traditional media discourse analysis, and biographical interviews with rural producers. Also, it presents the motivation to conduct this research and the researcher's positionality during the research process.

Section II contains three main chapters that guide the thesis in answering each practical question shaped to fill the theoretical gap: Chapter 6 presents the article, pluriverse in science: discourses of Amazonian land-use change and socio-environmental (in)justice. This article engages with a scientific discourse analysis of land-use change in the Amazonian region and its interaction with socio-environmental (in)justice, considering the pluriversal perspective. It responds to the main questions: Do hierarchies in scientific knowledge production contribute to silencing subaltern voices and hiding a pluriverse approach when writing about Amazonia land issues? And if so, how?

Furthermore, Chapter 7 presents the article, the role of social and traditional media in the Amazon forest: in search of pluriversal discourses. This article presents a critical discourse analysis of traditional and social media related to socio-environmental dynamics in Pará and the Brazilian Amazon forest over one year. The article responds to the question: What are the socio-environmental discourses about Pará's Amazon forest in social media and newspapers? How are they configured? And, which voices are heard and excluded?

Chapter 8 presents the article, Rural producers' discourses on the Brazilian Agricultural Frontier: between local and external narratives on land and forest. This article explores the intricate relationship between national and global discourses and narratives of rural producers in Novo Progresso, an emblematic municipality located along the BR-163 highway on the agricultural frontier in the Brazilian Amazon. The study answers the question: How do rural producers' historical and present positioning and narratives shape land use and management on the agricultural frontier in Novo Progresso?

Section III presents the summary of the results, accompanied by an in-depth discussion that allows us to identify the main ideas and concepts to fill in the theoretical gap. Chapter 9 summarises all general results from Section II. It displays the main findings and makes interlinkages in the findings. These latter are discussed in Chapter 10 while fulfilling the main objective: to contribute to the pluriverse in intersecting hybrid contexts. Finally, Chapter 11 presents the final remarks and reflects on the research.

3   The Pluriverse: challenging the "one world" view

The pluriverse theory is rooted in the broader framework of decolonial thinking, so Chapter 3.1 presents essential concepts, such as colonialism and coloniality, modernity and one world vision, and decolonial thinking, to deepen and explore the pluriverse and its implications in Chapter 3.2.

3.1   Colonialism and Coloniality

The pluriverse aims to dismantle the structures and legacies of colonialism and coloniality. To deepen the pluriverse, it is necessary first to explore the differences between colonialism and coloniality. Quijano (2000) and Maldonado-Torres (2007) explained the difference between colonialism and coloniality. Both agreed that colonialism refers to a political and economic dynamic where the autonomy of a nation or its people is contingent upon the authority of another nation, effectively designating the latter as a domain. This means colonialism involves acquiring and maintaining political control over another sovereign nation or territory (Maldonado-Torres, 2007).

On the other hand, coloniality endures power structures that originated in colonialism but extend far beyond the confines of colonial administrations (Quijano, 2000). Consequently, coloniality persists beyond the era of colonialism, manifesting itself in literature, academic norms, cultural norms, common perceptions, personal aspirations and various other facets of our modern contemporary existence (Maldonado-Torres, 2007; Quijano, 2000). Mignolo (2011) states that coloniality refers to the essential logic that has moulded Western civilization from the Renaissance to the present day, with historical European colonialism of the Abya Yala and the enormous trade of African enslaved as a crucial component; this is what formed the Americas and the Caribbean.

Coloniality continues to define labour, intersubjective relations, culture, and knowledge production well further the limits of colonial rule. Thus, coloniality is the expression of globalisation and the linear (universal) global (one-world) thinking that persists within the histories, narratives and feelings of Latin Americans and Caribbeans (Mignolo, 2011, p. 3).

From this context, colonialism and coloniality are identified in several dimensions and dynamics. For instance, Quijano (2000) concept of "coloniality of power" identifies the racial, political, and social hierarchical orders imposed by European colonialism in Latin America. These hierarchies prescribed value to certain peoples and disenfranchised others, creating a caste system where Europeans were at the top of indigenous

Coloniality and colonialism of nature (?)* - Cacatua ninfa

*Bird in cages in the middle of the Amazon rainforest. Fieldtrip in Novo Progresso, Pa, Brazil.

peoples. Furthermore, Gutierrez Chong (2010) discussed subalternity to analyse the persisting power and exclusion dynamics. The author exposes that despite the formal independence of many colonised nations, structures of subalternisation persist in the form of coloniality. This manifest itself in socio-economic exclusion, cultural marginalisation and the devaluation of indigenous knowledge in the contemporary context. Through the imposition of European culture and knowledge systems indigenous languages, religions and knowledge were delegitimised and suppressed, while European systems were promoted as superior and universal (Fraga, 2015). Scholars have highlighted how subalternity[1]

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[1] For this thesis, subaltern refers to social sectors in a disadvantaged position within power relations and class struggle. It implies a condition of inequality in the imposition of hegemonic ideas (Amaya, 2013; Pajoni, 2007; Spivak, 2004; Urueña-Sánchez, 2020).

and marginalisation[2] affect various spheres of life, including the essence of relation and being (subjectification of humans and nature), knowing (modes of knowledge) and power (modes of organisation)(Escobar, 2016; Kothari et al., 2019; Maldonado-Torres, 2007; W. Mignolo, 2007). These examples show that colonialism can still be exercised through several dynamics, and coloniality is an everyday issue through the imposition of Western modernity in Latin America.

3.1.1 Western and Eurocentric sense of Modernity: universal and one-world view

Modernity refers to a historical period and a set of socio-cultural norms that emerged primarily in Europe from around the mid-17th century (with the Renaissance) to the mid-20th century. Mignolo (2007) argues that *"Modernity appears when Europe affirms itself as the "center" of the world"* (p. 453). During this period, a set of norms was established, rules such as

    a) scientific and rational thought, the belief that in the power of science and reason, it is possible to address all human challenges and improve society;

    b) individualism, an emphasis on personal autonomy and freedom, where individual rights are over collective and communal identities;

    c) industrialization and liberalism, a transition from local agrarian economies to industrial, with the aim of production, productivity, labour specialization and economic growth, where growth has no limits;

    d) progress, where it is believed that humanity is moving towards a better future through science, technology and social improvement;

    e) creation of dichotomies, where modernity promotes the dualities between religion and reason, right and wrong, good and bad, human and nature, among others;

    f) universalism, where is believed that universal values and human rights that should apply to all people, regardless of culture or context (Dussel, 2013; Escobar, 2004; Fraga, 2015; Giddens, 1990, p. I; Haesbaert, 2020; Kaul et al., 2022; Kothari et al., 2019, p. xxii; Mansilla Quiñones et al., 2019; W. Mignolo, 2007, p. 450).

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[2] Marginalised are those sectors that have been displaced in society, whether for economic, social, cultural or political reasons. The marginalised are voiceless and invisible in dominant public discourses, and excluded from hegemonic narratives(Amaya, 2013; Pajoni, 2007).

Coloniality of nature (?)* - Castanheira do Pará

*The Castanheira do Pará is the symbol tree of the State. Here it is growing back after the use of fire to clear the land for pasture. Novo Progresso, Pará, Brazil.

These fundamental elements of modernity rooted in the Eurocentric perspective present European experiences and values as "universal modernity" and a unique "one-world view". This universalism obscures the specificities of non-European cultures and histories, rendering them invisible or inferior due to colonization and conceptualization of modernity associated with the Eurocentric and Western European Enlightenment. Maldonado-Torres (2007) stated that, as modern individuals, we are immersed in coloniality continuously and daily.

The idea that Eurocentric and Western modernity represent the summit of human development is challenged as it is bound inevitably by a system structured around the concept of race, international governance, cultural imperialism, and global capitalism (Maldonado-Torres, 2007) that auto-replicates itself through its Western universal (also known as one-world) ways of knowledge production. The imposition of Western norms, values, and ways of knowing as "universal" and "one-worlders" and the modern model perpetuates the marginalization and exploitation of formerly colonized people (W. Mignolo, 2011; Querejazu, 2016; Quijano, 2000).

Modernity continues to have implications for everyday life in Latin America, evolving through the perpetuation of coloniality. For instance, Machado Aráoz (2010) argues that the "modern coloniality" of nature is rooted in the powerful

impact of its knowledge system. The author states that the modern epistemic framework is so practical that the physical aspects of colonization, such as military conquest, political domination, and economic exploitation of marginalised peoples and their lands, are both the result and the prerequisite of a more fundamental conquest, that of knowledge and comprehension. Therefore, this deeper conquest is semiotic, involving the subjugation of nature itself, including human nature, through systems of meaning and representation. In essence, the tangible acts of colonization are intertwined with and dependent upon a more subtle yet pervasive colonization of knowledge and comprehension (Machado Aráoz, 2010).

A decolonial perspective understands modernity as a global phenomenon that arose with European colonial expansion, is based on Eurocentrism and coloniality, and has been inherently violent and exclusionary towards colonised peoples and their knowledge. Therefore, a decolonial turn is proposed, challenging this hegemonic conception of modernity and the one-world view.

3.1.2 De- and post-colonial thinking as counteract to modernity and coloniality

Decolonial thinking is a critical response to coloniality, which refers to the enduring power structures and social hierarchies established during the colonial era that continue to affect contemporary societies. Decoloniality is framed as an "ongoing process" of decolonisation that seeks to challenge and transform these colonial legacies. It emphasises the need for a radical change in how subjects are understood within societies, going beyond mere economic liberation to address symbolic and identity-related issues (Maldonado-Torres, 2007). Mignolo (2011) suggests that decoloniality is more than a theory but an epistemic and political project (p. xxv); it is a delinking and disengaging from Western epistemology (Quijano, 2000). Decolonial thinking implies the creation of new epistemological perspectives that can undermine various forms of oppression, such as sexism and racism, and advocates a "decolonial attitude" that inspires critical analyses and alternative ways of thinking and living (Dussel, 1990). This attitude is rooted in the experiences and struggles of those marginalised by colonial power dynamics, situating them as active subjects capable of forging a more just and equitable world (Maldonado-Torres, 2011).

Post-colonial thinking is another arena where colonialism, coloniality, modernity, and the one-world view are discussed. Post-coloniality emerged from

the British colonial experience, particularly in regions such as Egypt, Palestine and India, and gained prominence after the emergence of the concept of post-modernity in the late 1970s (Mignolo, 2011, p. xxv). In the early stages, decolonial thinking was based on the context of Latin American coloniality (Dussel, 1990; Mignolo, 2011). Both postcolonial and decolonial thinking deal with colonial legacies, although they differ significantly in focus, scope, and implications. Postcolonial theory primarily investigates the cultural consequences of colonialism, and decolonial theory highlights coloniality's permanent character and argues for a more significant and more drastic restructuring of knowledge and power systems (Escobar, 2018, p. xiv; Maldonado-Torres, 2011; W. Mignolo, 2011, p. xxvii; Quijano, 2000). None is better than the other line of thinking; these are only complementary, challenging colonialism and coloniality with goals of social transformation (W. Mignolo, 2011, p. xxvi). Both lines of thought might be reflected in this thesis; however, there is an inclination towards decolonial thinking and approaches to the pluriverse.

The decolonial line of thought is not a single one; academics all over the world are participating in and with decolonial thinking, creating concepts, and engaging with many decolonial practices. This thesis is mainly based on exploring a framework born in the heart of Latin America and spread worldwide among many people engaged in post- and decolonial thinking, the pluriverses. Chapter 3.2, will further explore the pluriverse.

3.2 The pluriverse: Latin American multi-episteme for decolonising

The pluriverse is a holistic framework that combines ontological and epistemological plurality with political and ethical imperatives (Querejazu, 2016). The thinking is mainly (based on two) claims: (1) to challenge the homogenizing tendencies of coloniality and modernity, and (2) to advocate for a world where diverse realities and ways of knowing coexist and thrive. Oslender (2018) simplified the idea by saying: *"There are distinct worlds that have historically been marginalised and suppressed by Western cosmology and its universalizing tendency, which claimed a superior position over these "other" worlds."* (Oslender, 2018). Yet, other authors suggest a more complex description. For instance, Hutchings (2019) suggests other vital elements from the previously

mentioned 'multiple epistemologies' and 'critique of Western universality'. These are

a) relational ontology, which allows for the coexistence of different worlds without one subsuming the others;
b) ethical implications, suggesting that the focus should shift to understanding the complexities of ethical relations between different worlds; and
c) Utopian vision, where pluriverse should be viewed not just as a condition of existence but as a utopian vision for a world free from colonial domination (Hutchings, 2019).

Instead of seeking a single universal truth, the pluriverse advocates for acknowledging and respecting multiple worldviews, knowledge systems, and cultural perspectives (Escobar, 2004). The pluriversal thinking promotes exploring and validating alternative epistemologies and knowledge traditions marginalised or suppressed by colonial powers (Escobar, 2016; Leff, 2017; Mignolo, 2007; Querejazu, 2016). Escobar (2004) argues for pluriversal recognition and the coexistence of diverse ways of understanding the world. A central idea revolves around the invisibility of the pluriverse, meaning that *"what is not recognised is systematically constructed as non-existent or as an unacceptable alternative to what is recognised"* (Escobar, 2016). This includes indigenous knowledge, non-Western philosophies, local ways of understanding reality, and the human, natural, and spiritual world (Querejazu, 2016). It incorporates an intersectional approach, recognising the interconnectedness of various social categories such as race, gender, class, and ethnicity (Mignolo, 2007). Also, it seeks to understand how different forms of oppression intersect and influence one another (Escobar, 2016). It is not the pluriverse against the universal world but an invitation to dialogue and interaction between diverse cultures and knowledge systems (Zuckerhut, 2017). In addition, it seeks to create mutual learning and understanding spaces, fostering a more inclusive and equitable pluriversal discourse (Querejazu, 2016).

Furthermore, it is essential to note that pluriversal thinking does not have a single origin or a fixed set of creators; instead, it has evolved through the contributions of various people, more-than-human species, lands and waters engaging in local fights for recognition, rights, acknowledgement, and decolonial and postcolonial discourses. Thus, the pluriverse is derived mainly from non-academic contexts in

Latin America (and, of course, beyond), such as Zapatista, Andean *campesines*, Afro-Colombian Movements, and feminist decolonial movements (Escobar, 2016), among many others. Escobar (2010) suggests that neo-liberalism developmental reforms were earnestly embraced in Latin America in contrast to other parts of the world, leading to all forms of disputes and socio-economic, political, and environmental issues. Fraser (1990) adds that subaltern groups create and circulate counter-discourses, allowing them to formulate and navigate "*oppositional interpretations of their identities, interests and needs*" (p. 67). Therefore, many grassroots movements, indigenous and traditional communities in Latin America actively resist, challenging this "development" modern world by promoting different alternatives (Rodríguez Castro, 2021, p. 4) that have translated into what we understand for pluriverse. However, as it is impossible to present all worlds in this thesis (which is part of the pluriversal framework), the following sub-chapters will guide the reader through a resume of Latin American indigenous populations, grassroots, traditional communities, and academics' theoretical and practical constructions to reach the pluriverse discussions from the Latin American and Brazilian perspective.

3.2.1 Traces of the pluriverse: from grassroots movements to the academy

> "*Behind are the same simple, ordinary men and women who are repeated in all races, painted in all colours, spoken in all languages and lived in all places.*"
> Fourth Declaration of the Lacandon Jungle
> (EZLN, 1996b; UN3 TV, 2014)

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The Zapatistas movement: a world within many worlds

When discovering pluriversal thinking, it is expected to find many books and articles that place the Zapatista movement as the initiator and catalyst of pluriversal discussions in Latin Amercia (Conway & Singh, 2011; Ehrnström-Fuentes, 2016; Escobar, 2018; Kothari et al., 2019; Perry, 2020; Querejazu, 2016; Zuckerhut, 2017). The Zapatistas are *campesines* (peasants) and indigenous communities organized in southern Mexico to counter oppression and fight for recognition. The Zapatistas base its name on the Mexican revolutionary "Emiliano Zapata", who also fought during the Mexican revolution (1910-1920) for *"tierra y libertad"* (land and freedom), based on the narrative *"la tierra es de quien la trabaja"* (land belongs to those who work it) (Reyes Godelmann, 2014). The Zapatista Army of National Liberation (EZLN) had its uprise on the 1st of January 1994 in Chiapas, Mexico. They became international importance when declaring an armed resistance against neoliberal globalization and the North American Free Trade Agreement (NAFTA)(Reyes Godelmann, 2014; van der Haar, 2004; Zugman, 2005). In the beginning, they did not intend to become the representation of the Mexican indigenous movement; however, EZLN adopted this role and compromise (van der Haar, 2004). The Zapatistas came in response to the centuries of marginalisation and exploitation of Mexico's indigenous peoples and *campesines*. Their primary purposes are aligned with libertarian socialism, horizontal organization, emphasizing direct democracy and the rejection of neoliberal capitalism (Reyes Godelmann, 2014).

Zapatistas have made many contributions to the pluriverse, but the authors often highlight two essential inputs: 1) In July 1996, the First Intercontinental Meeting for Humanity and Against Neoliberalism was held on Zapatist land. During this event, the "Subcomandante Marcos" (lead figure for the EZLN) delivered a memorable speech in which he pronounced the phrase *"Es necesario hacer un mundo nuevo. Un mundo donde quepan muchos mundos, donde quepan todos los mundos."* (It is necessary to make a new world. A world where many worlds fit, where all worlds fit.)(EZLN, 1996a). This discourse became the pluriversal frame and banner, "a world where all words fit" (Escobar, 2016; Kothari et al., 2019; Querejazu, 2016). 2) Over the years, the Zapatistas' fight has delivered many indigenous and *campesines* communal strategies. They structure autonomous

municipalities based mainly on multi-epistemic and auto-sustainable strategies, which other groups in Latin America have adopted, such as independent forms of government and collective decision-making, education, and food security strategies (e.g. *"caracol"* communal centres and *"Juntas de Buen Gobierno"*)(Morel, 2023; Zugman, 2005).

Regardless of the suffering and repression, the Zapatistas are still fighting for indigenous and *campesines* rights and recognition, fomenting and collecting solidarity and multi-epistemic, feminist and pluriversal auto-government, and educational strategies worldwide (Gonzales Casanova, 2009, p. 344).

Andean campesines and "buen vivir"

Andean *campesines* are other grassroots movements highly considered when discussing the early traces of academic pluriverse thinking. *Campesines* is a term used across different countries in Latin America that refers to peasant farmers. In this case, the *campesines* inhabit the Andes highlands of Colombia, Perú, Ecuador, Bolivia, Chile and Argentina. Andean campesines are not a single population but many traditional and indigenous communities that have preserved their ways and knowledge despite historical exploitation and marginalisation. Their struggles are similar to Zapatistas, historically challenging neoliberal capitalist and developmental dynamics, fighting for rights and recognition. They emphasise the importance of agricultural practices, communal land ownership and cultural heritage preservation, particularly their cosmovision.

Authors have identified in Andean *campesines* cosmovision a diverse way to live life, which has become one of the main contributions to the pluriverse framework. Therefore, authors have tried to translate, to the academic world, some main characteristics of this cosmovision. For instance, the following concepts: a) *"complementaridad" (*complementarity), which means opposites complete each other. Without this, no one and nothing can be whole. b) *"Correspondencia"* (correspondence), where elements are connected in a balanced relationship, and c) *"reciprocidad"* (reciprocity), adding justice to any relationship (Huanacuni, 2010, p. 34; Querejazu, 2016). Then, according to this imaginary, everything is related; nothing can be an abstraction or exist by itself and will be just. Another concept is "relationality", reality's leading and fundamental principle, where humans, nature and spirituality participate equally. This breaks the dichotomy of

humans and nature, exploring and interacting in a world where everything is related and depends on each other (Querejazu, 2016). These concepts are used in daily life; for instance, Andean *campesines* use the *ayllu* (community) organisation, where matter, energy, time and space are entangled in economic, social, spiritual and political association (Yampara Huarachi, 2011, p. 17). This reflects territorial distribution, as in the *ayllu* organization, the territory is not fixed but is a continuous negotiation and alliance with different neighbour ethnic groups (Platt, 2010). The *ayllu* is seen as the organization of all life, not just political, economic, or social human life, but life in general. It encompasses living spaces and represents the idea that everything is interconnected (Huanacuni, 2010, p. 35). As explained, this cosmovision and traditional dynamics have captured academics' attention, which now exemplifies the pluriverse with the Aymara (indigenous Andean population) concept of "*buen vivir*" (good living). *Buen vivir* prioritizes harmony and respect for nature and community well-being. This cosmovision promotes a holistic understanding of well-being that integrates social, environmental, spiritual and cultural dimensions (Escobar, 2016; Huanacuni, 2010, p. 35; Querejazu, 2016). However, the success of this worldview has been such that policies have tried to focus their efforts on this framework, as will be explained in Chapter 4.2.

Afro-Colombian communities: "sentipensar" and relational ontologies

Another group that has been historically largely marginalised is the Afro-descendants in Latin America. Colombia's Afro communities have contributed pluriversal thinking through their cultural heritage and distinct social practices. Afro-descendants brought to the Americas, against their will, built their own cultural identity in (mainly the Pacific and Caribean region of) Colombia while fighting for freedom, recognition, rights and autonomy and against systemic injustices (Lozano Lerma, 2016, p. 17). However, these also preserved their cultural and ancestral practices and knowledge. For instance, the Black Communities Process (PCN) organization has documented the diverse human-nature entanglements and interactions, as well as the traditional production and local sustainable practices (Oslender, 2018). Along with indigenous groups, afro-Colombians engage in dynamic processes of relationship and integration, creating shared spaces for recognition and decision-making (Lozano Lerma, 2016, p. 17). Afro-communities are known for their spiritual practices, music, dance, and oral traditions. For instance, Fals Borda described how Afro-Colombian communities combined reason and love, mind and heart, to navigate

life and understand their reality; he called this "sentipensar" (feel-think) (Aguilar, 2020). Similarly, Escobar (2016) explored Afro-Colombian cosmovision and explained the three intertwined worlds, *"the world below or underworld; this world, or the human world; and the world above, or spirit world/supra world"*, focusing on the interconnected nature of all entities, naming this, the relational ontology. Adding to relational ontology, Oslender (2018) discusses the aquatic epistemologies as a form for understanding how Afro-Colombian communities in the Pacific have shaped their identity and practices through their relationship with the aquatic environment. He argues that this local knowledge is crucial to the region's relational ontology, reflecting the complex socio-spatial connections between people and their natural surroundings. Moreover, local aquatic epistemologies serve as forms of resistance and cultural reclamation, particularly in the context of the ongoing struggles for territorial and cultural rights (Oslender, 2018). These concepts of relational ontology and "*sentipensar*", aid in explaining, from their ontological and epistemological differences, that everything is defined by its connections and interactions with other things, complementing the Andean concept of *buen vivir*.

The feminist pluriversal and multi-epistemic thinking from Abya Yala

The name Abya Yala (land in its full maturity) comes from the Kuna people in Panama and Colombia. The Aymara leader Takir Mamani proposed using Abya Yala instead of Latin America during the World Council of Indigenous Peoples meeting in 1977 (Native Web, 2002). Aby Yala has been used in the last decades to embrace the indigenous, grassroots, activist and decolonial academic movements from non-European standpoints. It claims indigenous recognition, knowledge, rights and cultural practices (Albó, 2011). The term "Latin America" starkly contrasts the concept of a multilingual continent. It is a term that includes all languages of Latin origin and excludes all others (Albó, 2011).

Moreover, the feminist thinking from Abya Yala represents a diverse and rich body of thought that challenges both Western and white feminism and traditional Latin American patriarchal structures. In the context of community feminism and indigenous women's struggles, "Abya Yala" is also associated with searching for a good life (Suma Qamaña) and constructing alternatives that challenge the patriarchal and colonial structures imposed by Western modernity (Gargallo, 2013, p. 114). The Abya Yala feminist perspective emphasizes the intersections of gender with race, class, ethnicity, and sexuality. Feminist thinking and action recognise that women in Abya Yala face multiple, interconnected forms of

*This is also part of a pluriverse - Frango caipira**

*A family shared this food with me during my fieldwork in Novo Progresso. For the first time, I killed and cooked a farm-fed chicken. Novo Progresso, Pará, Brazil.

oppression that cannot be addressed through a single-issue approach (Cariño Trujillo, 2019). Aby Yala's feminist thinking has brought to the discussion the coloniality of gender, body-territory, accountability, care, communitarian focus, playfulness, loving perception, and intersectionality concepts, among many other thoughts and research methodologies, that have broadened the pluriversal and multi-epistemic approaches (Cariño Trujillo, 2019; Carranza et al., 2023; Gargallo, 2013, p. 114; Haesbaert, 2021; Lugones, 1987, 2008). Particularly, feminist approaches have extended the multi-epistemic, ontological, and pluriversal methodologies to spheres generally omitted by traditional Western and Eurocentric academia.

For instance, Lugones (2008) discusses the coloniality of gender. This concept addresses how gender relations have been influenced by coloniality, creating hierarchies that oppress women, especially indigenous women. Indigenous women's struggles seek recognition of their rights as women and challenge

colonially imposed notions of gender, promoting a more inclusive and relational view of life (Lugones, 2008, p. 19). Urretabizkaia (2020) demonstrates this when explaining the case of the *Federación Nacional de Mujeres Campesinas Artesanas Indígenas Nativas y Asalariadas del Perú* (FENMUCARINAP) and their struggle for food sovereignty incorporating an intersectional perspective (p. 7). This means they recognise and articulate women's diverse oppressions in their communities, integrating their experiences in the struggle for peasant rights and agroecology. Through this articulation, they seek food justice, women empowerment, and the transformation of power relations in their local contexts (Urretabizkaia, 2020, p. 7). Also, Padierna Jiménez (2013) explains the case of Zapatist women demanding rights and recognition, which in many cases differ from the Mexican National feminist demands and urban to rural feminist demands. Despite facing internal challenges, such as exclusion attempts and the lack of recognition of some women within their communities, they have managed to articulate their needs in external spaces, such as marches and indigenous councils, seeking to create chains of equivalence with other women in the country. Padierna Jiménez recognised the impact of Zapatista women, which has been significant in several aspects. For example, visibility and voice: They have made their demands and concerns visible nationally and internationally, enriching the debate on gender and rights in Mexico. Change in gender perception: Their active participation has contributed to a change in the perception of gender within their communities, promoting equality and collaboration between men and women. Community strengthening: By advocating for collective rights and community organisation, they have strengthened the social fabric and promoted a sense of belonging and shared responsibility (Padierna Jiménez, 2013). Furthermore, Gargallo (2013) explains *cuerpo-territorio* as a term that implies that the body is not only a physical space but is also loaded with cultural, historical and political meanings. In this sense, the "territorial body" becomes a place of resistance and vindication in the face of the oppression feminist indigenous face personally and collectively (Gargallo, 2013, p. 153).

These examples help to extend the pluriversal discussion of worlds within worlds (internal differences within marginalised groups) and the process of imagining a world where all worlds fit. In addition, it carries different ways of understanding life and ways of living while embodying the fights and struggles of indigenous women. As Lugones (1987) forewarned, this recognises the existence of worlds within other worlds where loving perception and playfulness intersect.

The pluriverse and the scholars

> *"Ein Vorteil dabei ist, dass ganz viele Meinungen und Blickwinkel auf ein Thema gezeigt werden. Alle in der Gruppe können sich einbringen und so verschiedene Perspektiven, Gefühle, Kämpfe um Gerechtigkeit kartieren. Außerdem bringt es doch auch viel mehr Spaß, im Team zu arbeiten."*
>
> Movie Yuki from the Kollektiv Kartattack (2023)

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As I have explained, the pluriverse is attributed to the thoughts and cosmovisions of grassroots and indigenous populations. Nevertheless, Latin-American scholars based in North-Western Universities, mainly in the United States of America, brought the concept to Western academic knowledge, where it gained influence. The first to name it was Arturo Escobar, but it was before and after being referred to by academics such as Anibal Quijano, Walter Mignolo, Enrique Dussel, Ramón Grossfoguel, Nelson Maldonado-Torres, Enrique Leff, María Lugones, Gloria Anzaldúa, etc. They brought concepts such as coloniality, modernity, Latin American identity, gender power relations, and borderlands, among many others, to the discussion (see Chapter 3). Furthermore, the pluriverse and decolonial ideas have spread through scholars engaged in different Western and non-Western academic and activist circles worldwide, such as Donna Haraway, the working group AG-KGGU, and Organotango or Kartattack collectives, among others, actively working to shift the focus away from "Western science." In their works, they incorporate perspectives from subaltern groups around the globe, treating them as authors, delving into the understanding of non-scientific epistemologies (such as *cuerpo-territorio, Ubuntu* and *sentipensar*), and

employing research methods that seek to capture alternative ways of knowing, including creative and artistic approaches (see Qr-code on Chapter 4.1.5) (Gottschlich et al., 2022; Lüdemann et al., 2025; K. Schmidt, n.d.; Singer et al., 2023; Singer & Keding, 2022; Tello & Neuburger, 2023). However, an ongoing challenge remains in translating non-scientific knowledge into scientific language while preserving the complete sense of meaning, representing a post/colonial appropriation of knowledge (DeLoach, 2023; Escobar, 2016). Also, international scholars are engaging with the pluriverse from multidisciplinary and different research fields, such as anthropology, arts, geography, political sciences, psychology, and sociology, and in the areas of cultural policy, de- and postcolonial studies, education, environmental justice, governance, gender equality, holistic worldviews, migration, political ecology, and racism among many others.

Furthermore, Van Zeeland (2024) made a selection of designed principles to navigate and/or approach the pluriverse as a researcher, where it is possible to find critical elements, such as

   a) cultivating radical empathy,
   b) embracing a participatory approach,
   c) encouraging physical encounters,
   d) fostering (re)imagination and delinking,
   e) employing narratives,
   f) harnessing knowledge, and
   g) utilizing mapping, visual thinking, and bodily expressions,

A great example fostering many of these tools is the book by Kothari et al. (2019), "Pluriverse: a post-development dictionary", where critics and many pluriversal topics from around the globe are presented. They engage with critique to "development" and foment ecological sustainability, empowerment of local communities, social justice, inclusion, pluralism, diverse perspectives, cultural visions and local knowledge, and re-politicisation of the socio-ecological transformation (Kothari et al., 2019). These collectively contribute to rethinking "development" while prioritising a pluriversal socio-ecological well-being, equity, and cultural diversity. However, as the pluriverse has gained considerable terrain on many discursive fronts, this thesis will continue to focus on the current pluriversal academic discussions in Latin America, which I will explain in the next chapter. Another example is the Global Tapestry of Alternatives, where activists and academics engage with communities worldwide under the pluriversal framework and take the pluriverse into action while trying to separate themselves

as much as possible from the universal world (Garcia-Arias et al., 2024). However, as the pluriverse has gained considerable terrain on many discursive fronts, this thesis will continue to focus on the current pluriversal academic discussions in Brazil, which I will explain in the next chapter.

3.2.2 Other current discussions in Brazil around the pluriverse: applications, implications and critiques

> *"I love life, I love what we dream. To this territory that crosses me, hurts me, makes me uncomfortable, makes me fall in love, intrigues me, and makes me passionate, to this territory that made me, this is for Latin America."*
> Santamaría Sandoval (2022)

The concept of the pluriverse has gained more recognition in recent years, becoming a strong discourse among many social and political actors, for instance, academic, artistic and activist circles, particularly in decolonial and postcolonial thinking but also in politics and policies (e.g. the implementation of the Andean "*buen vivir*" thinking in Colombian, Brazilian, Bolivian and Ecuatorian Political Constitution)(de Carvalho Dantas, 2021). The pluriverse concept has profound implications for how I (in/from/about Latin America) aim to understand knowledge production, social justice, and ecological sustainability or "development". Likewise, the pluriverse has become part of other Brazilian discussions through concepts, such as rurality and territoriality (Fonseca et al., 2023).

As the pluriverse's goal is not just about acknowledging diversity but about fundamentally restructuring our understanding of/and our practices in the world to include multiple realities that have been historically marginalised (Escobar, 2018; W. Mignolo, 2007), the concept also faces critiques regarding its practicality, potential for romanticization, risk of fragmentation, weaking it as a metaphor, and power dynamics. Therefore, addressing these critiques requires a careful and critical engagement with the pluriverse, ensuring that it contributes to genuine social transformation and justice. This chapter presents examples of Brazilian Amazon and stakeholders' current pluriversal approaches, applications, challenges, and criticisms.

How and where else is the pluriverse applied?

Many stakeholders in the Brazilian Amazon engage with the pluriverse from different scopes and perspectives, looking for ways to make them participative in everyday life while collecting and exploring the experiences of other ways and knowledges (Fonseca et al., 2023). However, this has its challenges, discussions and criticisms. Below, I will describe some authors' approaches and some areas relevant to this thesis that focus on the Brazilian Amazon. Chapter 4.2.2 will use these and other examples to understand the criticism towards the pluriverse.

Pluriverse in the Brazilian Amazon context

Decolonial and pluriversal perspectives have also influenced the Brazilian Amazon and vice versa. The Amazon region is characterized by its immense biodiversity and the presence of numerous indigenous, and traditional communities with distinct worldviews and knowledge systems, facing many socio-environmental issues. The Amazon comprises various groups and communities often mentioned as marginalised or neglected, including *seringueiros (rubber tappers), camponeses (small farmers), ribeirihos (riverine people),* indigenous peoples, *garimpeiros (small scale miners), caboclos (mestizos),* quilombolas (Afro-Brazilian communities), and grassroots movements such as *Movimento dos Trabalhadores Rurais Sem Terra* (MST) (landless movement) or *Comissão Pastoral da Terra,* among many other stakeholders influencing the region dynamics(Alves-Pinto et al., 2018; Burke,

This is also part of the plurivers - Arara*

* This bird has had its wings clipped so that it cannot fly long distances. During my fieldwork, in Novo Progresso, I found it in a

2012; Castro et al., 2017; Procópio, 2009; Villas-Bôas et al., 2018; Weißermel & Azevedo Chaves, 2020). Although pluriversal approaches stress the importance of including all these voices in land use and environmental conservation debates, Brazilian perspectives and their groups are not as commonly mentioned (compared to Zapatista, Andean peasant or Afro-Colombian) by Latin American pluriversal scholars (outside Brazil). Furthermore, Brazilian-affiliated authors do not often use the word (concept) pluriverse in their publications, as they use other (pluriversal) terms such as territoriality or rurality. For instance, this is demonstrated when using the search engines Web of Sciences (WoS) or *Scielo.br* in August 2024. While using the search string (pluriversos) OR (pluriverso) OR (pluriversal) OR (pluriverse) in all fields and index sections and Portuguese language, the search retrieved 10 articles in WoS and 9 articles in Scielo. Meanwhile, while using the search string (território) or (territorialidade) in all fields and index sections and Portuguese language, the search retrieved 270 articles in WoS and 2970 articles in Scielo. This does not mean that there is no pluriverse in the Brazilian context, but that the Brazilian academics writing in Portuguese are discussing other pluriversal concepts. Therefore, this thesis also aims to breach this gap by bringing more diverse Brazilian pluriversal perspectives by using the concept within the pluriverse discussion. Below are examples of scholars addressing pluriversal discussions, sometimes without using the word pluriverse for the Brazilian context.

Pluriverse in policy and politics

Two examples to show how the pluriverses are gaining ground in policy and politics areas is presented in the theoretical articles written by Carvalho Dantas (2021) "*Sistemas de vidas indigenas e positivaçao constitucional na America Latina: superaçao da coloniadade juridico-poutica, lutas e praticas do comum*", and Silva and Guedes (2017) "*Buen Vivir Andino: Resistência e/ou alternativa ao modelo hegemônico de desenvolvimento*".

Both articles discuss how the pluriverse, particularly "buen vivir" (pluriversal) thinking, forms part of some Latin American countries' political constitutions. They discuss what this represents and how this recognition is currently displayed in these countries. Silva and Guedes (2017) present the challenges based on a Western neoliberal model and paradigm of progress and development in Latin America. They explain that the constitutional recognition of "*buen vivir*" Latin American countries provides a legal basis for protecting human and

environmental rights. The recognition establishes a framework that prioritizes social equity, environmental sustainability, and the well-being of all citizens, moving away from purely economic growth metrics.

This article invites the reader to rethink the role played by national and international governmental organizations when talking about local development (K. P. da Silva & Guedes, 2017). Meanwhile, Carvalho Dantas (2021) presents a similar challenge, aiming for a legal-positivism (practical) way forward. This means that, regardless of the constitutional recognition of "*buen vivir*" in Ecuador, Bolivia, Colombia, and Brazil, he engaged with the need for applied legal frameworks that recognise indigenous and nature rights, cultural preservation, environmental sustainability, socioeconomic inequalities, political representation, and the challenges of unity within indigenous movements. The following table will present the similarities and differences on the approaches and challenges they present.

Table 1 Similarities and differences in approaches to pluriversal policies and politics between Silva and Guedes (2017) and Carvhalo Dantas (2021)

	SILVA AND GUEDES (2017)	CARVALHO DANTAS (2021)
THEORETICAL APPROACH	• Their work often emphasizes the philosophical and ethical dimensions of "*buen vivir*", focusing on its roots in indigenous cosmologies and its implications for social justice and environmental sustainability. • They explore how "buen vivir" critiques neoliberal development models and advocates for a more	• Carvalho Dantas, frames "Buen Vivir" within the context of constitutional law and political theory. He argues for the formal recognition of indigenous rights and the integration of "Buen Vivir" into legal frameworks, emphasizing the need for constitutional positivisation to ensure indigenous perspectives are respected and upheld within state systems.

	holistic understanding of well-being that integrates social, cultural, and ecological aspects.	
CRITIQUE TO COLONIALITY	• They critique coloniality from a cultural and ethical standpoint, emphasizing the need to reclaim indigenous knowledge and practices as a means of resistance against colonial legacies.	• He explicitly addresses the need to dismantle colonial structures within legal systems, arguing for a transformative approach that integrates indigenous rights into constitutional frameworks to confront and overcome coloniality.
PRACTICAL IMPLICATIONS	• Their approach tends to highlight grassroots movements and the part of indigenous communities in advocating for "Buen Vivir." They focus on the lived experiences of these communities and how their practices can inform broader societal changes.	• The article focuses on the institutional and structural changes needed within legal and political systems. Carvalho Dantas discusses the importance of creating new legal paradigms that reflect indigenous values and practices, advocating for a more inclusive and equitable legal framework.

These approaches and challenges already present some questions on the practicality and romanticization of the pluriverse, for instance, how rural producers (See Chapter 9) can fit into the "buen vivir" frame and live a contradicting life in capitalist structures. "Buen vivir" often uses indigenous context, but what can other worlds learn from it? "Buen vivir" for all species means much renunciation and surrender for the more privileged people. Would

privileged communities renunciate to it? Some of the answers can be found in [Chapter 9](#) and [Chapter 12.](#)

Pluriverse, as the voice for the marginalised and subaltern groups

When discussing the pluriverse, it has been essential to perceive where the marginalised and subaltern voices are found to give them the recognition, voice and space they deserve. For this example, Nascimento (2023) presents the article "*Os discursos pluriversos de uma ativista indígena e a interseccionalidade cosmopolítica como o movimento indígena*" and Weißermel and Azevedo Chaves (2020) "*Refusing 'bare life' – Belo Monte, the riverine population and their struggle for epistemic justice*"..

Nascimento (2023) delves into the significant role of Indigenous activism in Brazil, mainly focusing on the perspectives and contributions of Indigenous leader Sônia Guajajara. It highlights the intersection of ancestral knowledge and contemporary political engagement, illustrating how these leaders navigate the complexities of environmental and social justice. The document emphasizes the interconnectedness of their struggles with global issues, such as climate change and the exploitation of natural resources. The article underscores the importance of Indigenous voices in these discussions, framing their fight for their rights and global well-being. Nascimento (2023) addresses the evolution of Indigenous political representation in Brazil, particularly after the 1988 Constitution recognised Indigenous rights. It notes Indigenous women's increasing visibility and influence in politics, who challenge patriarchal structures and advocate for their communities and environmental sustainability. Weißermel and Azevedo Chaves (2020) converse with *ribeirhinos* exposed to the construction of the Belo Monte dam. The authors argue that implementing the Belo Monte project exemplifies the coloniality of power, which marginalises the knowledge and experiences of the *riberinhos population*. This marginalization leads to testimonial injustices, where the riverine communities' concerns—such as the decline in fish populations due to construction activities—are dismissed or ignored by authorities. The article highlights how the riverine people's ways of life and territorial claims were rendered unintelligible within the capitalist framework of the project, resulting in their assignment to a condition of "bare life." Through their analysis, the authors aim to shed light on the broader implications of large-scale development projects like Belo Monte, advocating for a more inclusive understanding of environmental justice that acknowledges the voices and

experiences of marginalised communities. The article ultimately serves as a call to action for recognising and addressing the injustices faced by the riverine population in their quest for epistemic justice and rightful recognition.

Table 2 Similarities and differences in approaches to pluriversal approaches to marginalised voices from Nascimento (2023) and Azevedo Chaves (2020)

	NASCIMENTO (2023)	WEIßERMEL AND AZEVEDO CHAVES (2020)
MAIN TOPIC	• This article specifically examines the political role of Sônia Guajajara, an Indigenous leader, and her discourses that intertwine cosmopolitics and ethnopolitics. • It emphasizes the intersectionality of Indigenous struggles, particularly highlighting the role of Indigenous women in advocating for environmental and social justice.	• Weißermel and Azevedo Chaves emphasise epistemic justice, highlighting how the *ribeirihos* communities' knowledge and experiences were marginalised in the context of the Belo Monte project. • They argue that this marginalization led to testimonial injustices and a failure to recognise the *ribeirinhos* communities as traditional peoples entitled to rights and protections.
METHODOLOGICAL APPROACH	• This article employs an analysis of Sônia Guajajara discourses over the past decade. • Also, it incorporates theoretical-analytical debates with female authors to contextualize Guajajara's	• The study employs qualitative, in-situ methods, including interviews and case studies, to illustrate the lived experiences of the *ribeirihos* communities and their struggles for recognition and rights.

	discourses within broader discussions of cosmopolitics and ethnopolitics.	
PRACTICAL IMPLICATIONS	• The article prioritizes Indigenous voices by analysing Sônia Guajajara's discourses and activism, portraying her as an active agent in the political landscape. It emphasizes the importance of Indigenous agency and the complexities of their struggles.	• The article advocates for recognising the rights and knowledge of *ribeirihos* communities as part of a broader call for environmental justice.

These methodological approaches aid in recognising and acknowledging the pluriverse, presenting challenges for subaltern communities and people in the Brazilian Amazon. These challenges are shared and discussed further in Chapter 9 and Chapter 10 of this thesis.

Pluriverse with the aim of sustainable development and conservation

Latin America is a place that faces much global pressure due to its interest in protecting and conserving its natural resource areas. This pressure can be found mainly in the Amazon forest. For this example, it is presented De Wit's (2022) work, "*Seeing the Forest for the Trees Polycentric Climate Governance in the Amazon*".

De Wit (2022) discusses the influence of international pressure on climate governance in the Amazon. It highlights how international climate agreements and funding mechanisms can shape local governance practices and priorities. While international support can provide necessary resources for climate initiatives, it can also create dependencies that may compromise local autonomy and decision-making. The text points out that the reliance on international

funding can lead to governance structures that prioritize the interests of external actors over local needs, potentially sidelining indigenous perspectives and knowledge systems. This dynamic can result in governance that does not fully address the complexities of climate change experienced by local communities. However, the author explores the concept of Polycentric Climate Governance (GCP) and its application in the context of the Amazon region. It examines how GCP, characterized by multiple overlapping authorities and diverse stakeholders, can enhance climate governance by promoting local action and inclusivity. The research focuses on two case studies: the State of Acre in Brazil and the department of Ucayali in Peru, both of which have implemented innovative intercultural governance frameworks that engage indigenous communities in climate decision-making. The text highlights the potential benefits of GCP, such as improved stakeholder engagement and the emergence of diverse framings of climate justice. However, it also addresses challenges, including governance gaps that hinder the effective integration of local perspectives and the risks associated with reliance on international funding, which may compromise equity and impartiality. Overall, the author argues that while GCP offers opportunities for more just and effective climate governance, it requires careful consideration of local contexts and reforms to ensure inclusivity and equity in climate action.

Main Topic

The thesis focuses on applying Polycentric Climate Governance (GCP) in the Amazon region, explicitly examining the State of Acre in Brazil and the department of Ucayali in Peru. It aims to explore how GCP can lead to more just and effective climate governance by engaging diverse stakeholders, particularly indigenous communities. The research seeks to understand the implications of governance arrangements on justice dynamics and provide policy recommendations considering local knowledge and equity.

Methodological approach

The author employed a qualitative research methodology, including fieldwork, which involves conducting interviews and gathering field notes.

Practical Implications

The research provides actionable recommendations for improving climate governance in the Amazon, emphasizing the need for inclusive and participatory approaches that integrate local knowledge. Empowerment of local communities

by highlighting the importance of indigenous participation, the thesis advocates for policies that empower local communities to take an active role in climate decision-making.

The pressure to address urgent international needs places local communities in challenging circumstances. Top-bottom approaches and projects implemented without local consent marginalise local communities, perpetuating universal worldviews. These topics are addressed in Chapter 8 and Chapter 9.

3.3   Pluriversal challenges and criticism

This is also part of a pluriverse – BR-163 road fallen soldiers memorial*

As explained in the previous chapters, approaches to the pluriverse have provided more varied and different perspectives for finding or proposing solutions that challenge universality and open up the option of new worlds. However, while pluriversal approaches offer the transformative potential for decolonisation, they also face several challenges and criticisms that need to be addressed for meaningful improvement to be made when discussing and approaching the pluriverse. This sub-chapter presents some of those challenges and criticism.

* During the construction of the BR-163 in the middle of the jungle many soldiers died of malaria or snake bites.

A)   **Extreme relativism.** When discussing international relations, scholars point out the possibility of extreme relativism. They argue that the pluriverse concept might lead to extreme relativism, potentially undermining efforts to address global challenges that require coordinated action. Critics argue that embracing the pluriverse concept

too strongly might lead to all perspectives being considered equally valid, regardless of their empirical basis or practical implications (Ehrnström-Fuentes, 2016). Mignolo (2011, p. 223) contra argue that universal modernity introduced cultural relativism to hide colonial differences. He adds that restoring the dignity of all members of society provides the former colonial subjects the capacity to speak and be heard, acting as critical thinkers. For instance, (K. P. da Silva & Guedes, 2017) argue in their article that there is a need to recognise and integrate multiple worldviews regarding development. The lack of dialogue and understanding between different cultural perspectives creates barriers to implementing Buen Vivir effectively. However, the challenge in communities with worlds within worlds is finding solutions that allow for coexistence without imposing one group's world (Ehrnström-Fuentes, 2016). Furthermore, a multi-epistemic translation is needed, as not all worlds speak the same ontological and epistemological language, and not all worlds are per sé "just" and "purely good or bad". Then, ignoring these critiques has its dangers.

For instance, in May 2024, I attended the Political Ecology Conference in Lund, Sweden. I presented Chapter 9 of my work, which focused on the discourses of rural producers on the Brazilian Agricultural Frontier. I aimed to get expert feedback and share the narratives I had collected from these producers. After my session, I unexpectedly found myself talking with an indigenous leader from northeast Brazil. During our long conversation, I explained that I wanted to present these narratives as an option to start (pluriversal) dialogues with other Brazilian stakeholders. She told me that while she respected my intentions, the people I had spoken to (rural producers) represented those who had taken the land from her family in Brazil.

This experience already proves that even though pluriverse conceptually aims to have a world where all worlds fit, in those worlds, the practice of the pluriverse is still challenging and complex, as there are no good or bad or right or wrong, but people embodying the world (Neuburger, 2008).

B) **Practical implementation and global challenges.** There are concerns about how pluriversal principles can be practically implemented in policy-making and governance structures, especially in the context of

existing global power dynamics (Kothari et al., 2019). Furthermore, many pressing issues (e.g., climate change, pandemics, economic inequality) "require" coordinated global action based on shared understanding and goals. For instance, Silva and Guedes (2017) explained that the challenge lies in translating its principles into actionable public policies. The authors emphasize the need for participatory approaches involving local communities in decision-making processes, which are often lacking in practice. Also, De Wit (2022) explained from her work the difficulties in translating theoretical frameworks of GCP into practical governance actions, particularly in the face of existing power dynamics and institutional barriers. Furthermore, Chapter 9 reflects on how the international and national discourses influenced the local rural producers' decision-making, sometimes placing them in the circumstances between conservation and production.

C) **Potential for romanticisation.** Authors discuss the romanticization of non-Western or indigenous knowledge systems, arguing for a more nuanced approach that acknowledges these systems' complexities and potential contradictions (Ehrnström-Fuentes, 2016) (Cusicanqui, 2012). Weißermel and Azevedo Chaves (2020) already point out the issues; they explain that by highlighting the *ribeirihos* communities' fight for epistemic justice and their efforts to reclaim their identity and rights through the establishment of a Riverine Council, the article critiques the romanticization that can undermine their actual struggles and the validity of their knowledge and experiences in the face of environmental and social injustices. Procópio (2009) argues about the "myth of indigenous", which presents indigenous communities' perspectives between international human rights discourses. The author raises questions about how we can observe communities' practices involving issues like abortion, polygamy, and physical punishment, as well as the treatment of women, use of hallucinogenic plants, euthanasia, and the repression of homosexuality. Although these practices may be shocking and controversial, it is essential to understand these differences to prevent monopolizing the truth and idealizing indigenous cultures (Procópio, 2009). In Chapter 6 and 7, the topic is presented, offering some other examples where the romanticization of stakeholders directs the discussion to the danger of reproducing dichotomies.

D) **The absence of inclusion of populations or groups not so far from the universal modern world.** This perspective aligns closely with this thesis and a research gap this thesis closes. This is the exploration of possible worlds within populations growing closer to the universal or globalized world; I call these the "intersecting hybrid contexts." While much-existing research on the pluriverse has focused on traditional or rural communities, my work extends this exploration to hybrid context. These contexts, characterized by mixed cultural and ethnic heritage, occupy a unique position between traditional and modern, local and global. Despite not being considered "traditional" nor "indigenous" in the conventional sense, intersecting hybrid contexts may still embody distinct worldviews and practices, and at the same time, they have practices that perpetuate the single story of one world. However, this needs to be kept in mind: being (somehow) part of the one-world view does not mean that we cannot learn from these communities or that it is not essential to listen to them and ignore them, which very often happens. Every world is complex and full of contradictions, even in a pluriverse world, though, all ways of being contribute to the pluriverse. By focusing on these intersecting hybrid contexts, my research aims to expand our understanding of the pluriverse beyond the traditional/modern binary, suggesting that it can exist in the interstices and hybridities of contexts navigating multiple cultural influences. This approach challenges us to look for the pluriverse not only in spaces of obvious difference but also in contexts of apparent convergence, inviting us to consider how these contexts might maintain or create distinct "worlds" even as they engage with globalizing forces. This thesis closes this gap by considering and discussing these other intersecting hybrid pluriversal worlds in Brazil (See Chapter 10).

Identifying these challenges and criticism helps with engagements and encounters within the pluriverse. The pluriverse is a (vague) theoretical concept that needs to be filled with life, discourses and everyday interactions and practices between humans and non-humans. Something to highlight (often not mentioned by scholars) from these encounters is the understanding that the pluriverse, in practicality, is chaotic. Querejazu (2016) explains that it is not only about conceiving a world where many worlds can fit but also about the relation among

those worlds, even those that are not human, in a one-world reality where separation rules, relational thinking becomes key to reconciling and reconnecting what has been artificially detached. In order to achieve that goal, we do not have to step away from our metaphysics, but we have to provincialize them (Chakrabarty, 2000)

Based on these thoughts, frames, concepts, and challenges, but also in the everyday pluriversal entanglements and intersections, this thesis fills the gap to broaden the understanding and exploring the pluriversal world by approaching intersecting hybrid contexts in the Brazilian Amazonian discourses and narratives on land and forest. The next chapter will deepen into the Brazilian Amazon context to understand more about the theoretical and practical implications of the pluriversal research in this region.

3.4   Understanding the Pluriverse: A Personal Perspective

The pluriversal thinking deeply resonated with my worldview, challenging predominant narratives and inviting a broader and holistic understanding of reality. To articulate my perspective, I represented my understanding with the help of Rike Lenz, who helped me structure the design of the pluriverse in Graph 1, where the design symbolises the interplay between the "one-world" view, the pluriverse and the intersecting hybrid contexts.

The Black Line: The Predominant "One-World" View.
The black line in the figure represents the linear, singular narrative of the "one-world" view. This worldview is rooted in Western cosmology, emphasizing scientific rationality, progress, and development. Its linear trajectory reflects a rigid conception of how the world should function—a trajectory often seen as universal and unchallengeable. It creates dichotomies, such as "right" and "wrong" or "good" and "bad", and imposes a singular ontology and epistemology that disregards alternative ways of knowing and being. This dominant perspective shapes global systems and institutions, marginalizing diverse realities in its pursuit of homogeneity.

The Green Line: The Pluriverse.

In contrast, the green stripe represents the pluriverse: a world where diverse realities, ontologies, and epistemologies coexist and thrive. Unlike the linearity of the black line, the green line meanders in multiple directions, symbolizing the countless ways of knowing, doing, and being that exist across cultures and ecosystems. The pluriverse challenges the hegemony of universalism by embracing diversity and complexity. It acknowledges that no single worldview can encompass the richness of human and non-human existence. The green line embodies the possibility of mutual respect and coexistence among different lifeworlds, enabling the flourishing of alternative ways of understanding and engaging with the world.

The Purple line: Marginalization and Suppression.

The purple stripe illustrates how the "one-world" view perceives the pluriverse and its diverse realities. Historically, the black line has attempted to assimilate, suppress, or erase the plurality represented by the green stripe. The figure visually captures this dynamic, where the purple line appears "trapped" in the black line's rigid framework. This represents the marginalisation of alternative ontologies and epistemologies—whether through colonialism, economic systems, or epistemic violence. The purple line highlights the tensions and struggles faced by pluriversal realities as they navigate a world dominated by the "one-world" paradigm.

The Blue Line: Intersecting Hybrid Contexts.

The blue line represents intersecting hybrid contexts—spaces between the universal "one-world" view and the pluriverse. Both paradigms often marginalise these contexts. From the perspective of the pluriverse, they are perceived as part of the universal worldview and therefore excluded. However, this thesis argues that these hybrid contexts create their own unique ontologies and epistemologies, positioning them as integral parts of the pluriverse. The blue line's intersections with both the black and green lines signify the blending and negotiation of multiple realities, illustrating the potential for hybridity to enrich our understanding of diversity and coexistence. Recognizing and valuing these hybrid contexts makes it possible to move beyond rigid categorisations and appreciate the fluidity of knowledge systems and lifeworlds.

Reflecting on the Pluriverse

For me, the pluriverse is not merely an abstract concept but a framework for rethinking how we engage with the world and its inherent diversity. It challenges us to move beyond the confines of singular narratives and to embrace a multiplicity that honours different ways of being and knowing. The green line's fluidity and openness inspire a vision of a world where coexistence is not only possible but essential for collective flourishing. Yet, the purple line serves as a reminder of the persistent challenges to this vision. Similarly, the blue line highlights this thesis's importance and recognises hybrid contexts as vital contributors to the pluriverse, despite their complex positioning. By visualizing these interactions, this thesis contributes to establishing dialogues by suggesting that pluriverses exist in intersecting hybrid contexts, navigating between multiple cultural influences and the one-world view.

Graph 1 The pluriverse graph

"One world" view
Pluriverse
Marginalised pluriverse
Intersecting hybrid contexts
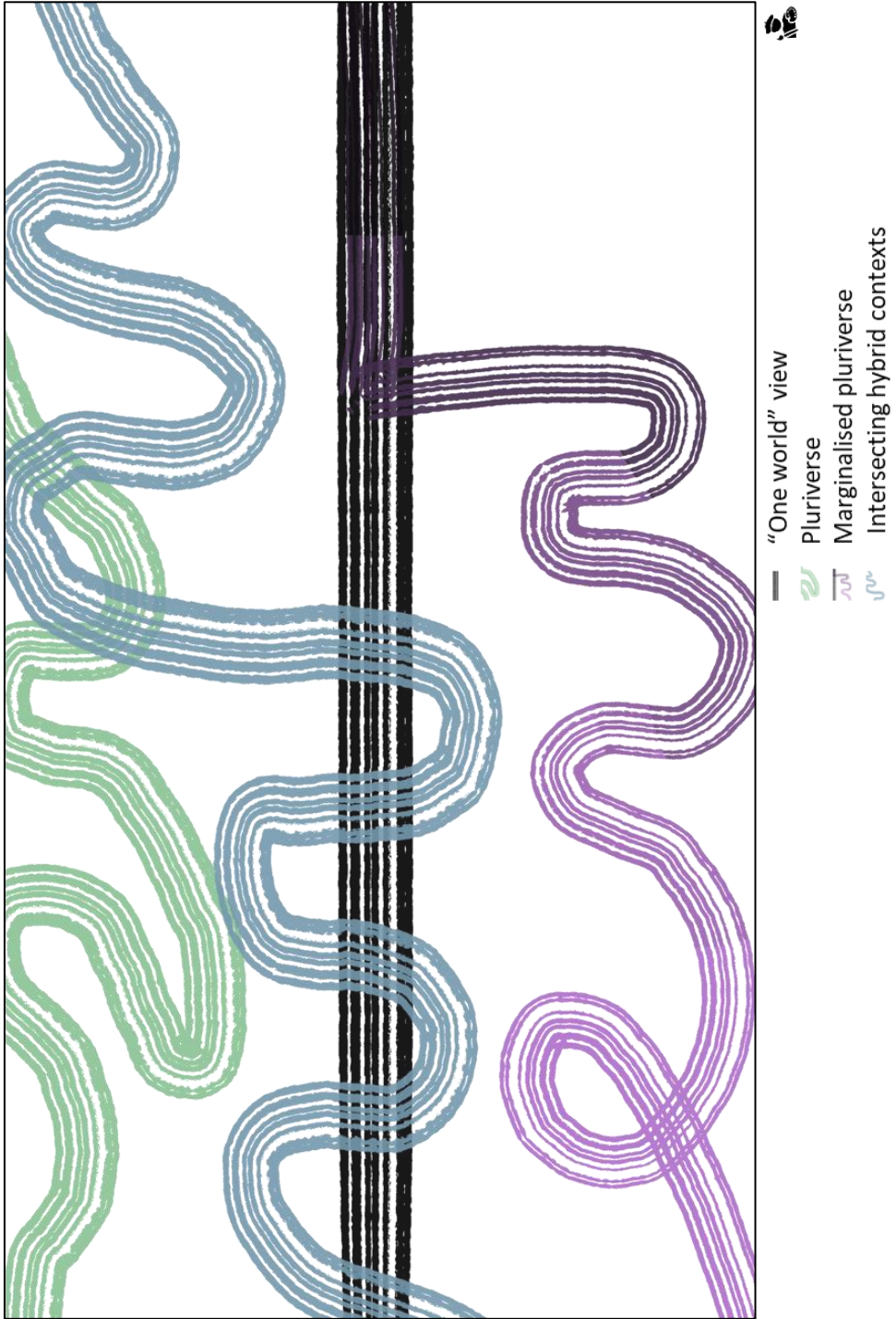
4 Discursive entanglements in the Brazilian Amazon

From the quiet sounds of the forest to the bustling life of the agricultural frontier.
The forest, Critical Soundscapes project (2024)
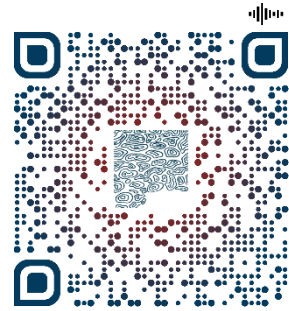
Link Here

The Brazilian Amazon, a vast and biodiverse region, contains a pluriverse of socio-environmental encounters, where complex interactions of ontologies, epistemes, knowledges and discourses intersect with pressing local to global dynamics. Extending over seven million square kilometres, the Brazilian Amazon embraces diverse ecosystems, indigenous territories, traditional communities, extractive communities, among many other communities and groups, and resource-rich landscapes that have long impressed pioneers, migrants, settlers, scholars, policymakers and activists alike (See Section II). Nevertheless, beneath its vegetation, it uncovers exploitation, marginalisation, violence and environmental degradation, marked by centuries of colonial intervention and capitalist expansion (Procópio, 2009). It is a region deeply entangled with coloniality, historical developmental waves and resource extraction, which presents a complex web of socio-environmental issues (RAISG, 2020). The closely linked colonial practices in the region foster capitalist domination and

marginalise local communities by depriving locals of voices and rights to articulate their knowledge, share perspectives on their realities and lived experiences, and participate in decision-making (Meneses & Bidaseca, 2018, p. 12). Therefore, to unravel the complexities of the Amazonian multi-dynamics, adopting a critical approach that embraces both the historical legacies of coloniality and the transformative potential, a pluriversal approach is imperative (Escobar, 2016).

In Chapter 3.2.2, the pluriverse around Brazil was explored. This chapter will focus on how the local-to-international discourses and dynamics have historically positioned the marginalised and subaltern groups in the Brazilian Amazon. To understand the region's oppressed groups and their fights, it is essential to address Brazil Amazon´s "developmental" and occupational history. This history has led to oppressed people and communities. Nevertheless, those seen as oppressed and marginalised are dynamic and shift within the historical discursive scope.

4.1   Shifthig discourses about the Brazilian Amazon marginalised groups

The Amazon has often been seen as an untouched and inhabited region. However, before colonial times, indigenous communities already had complex resource management strategies (Hastik et al., 2013). During the colonial era, many new settlers entered the forest through the rivers and established themselves along the riverbanks. These populations are now referred to as *ribeirinhos.* Moreover, communities formed by enslaved individuals who escaped also entered the forest, establishing *quilombolas* communities (ISPN, 2024). These were some of the first inhabitants of the region. However, during the 19th and 20th centuries, Brazilian governments saw these regions as untouched and full of resources. Developmental and migration dynamics happened, and groups such as *posseires, camponeses, pioneres, and garimpeires* (smallholders, farmers, pioneers, and miners, respectively), among other traditional and emerging communities that settled in the region, bringing new dynamics, new discourses and power relations (Oliveira & Torres, 2005; Torres et al., 2017). Below we will explore, some of this dynamics, discourses and power relations.

The seringeires. The discovery of vulcanization in the mid-19th century brought more people to inhabit the Amazon to extract the rubber from the wild Seringueira tree. This dynamic spurred the "Rubber Boom" and helped establish the *seringeire* communities. However, while operating in precarious conditions, they were exploited by the rubber barons (English, US-American and Brazilian exporters) who controlled the market and the means of production (Prescott Instruments, 2020). Many rubber tappers were subjected to a system of debt peonage, where they were forced to borrow money from their employers to cover their expenses, leading to a cycle of dependency and exploitation (Curtius, 2016; A. U. de Oliveira & Torres, 2005; Torres et al., 2017). The situation for *seringeires* took a significant turn during World War II when the demand surged due to the war. The Brazilian government initiated a program to recruit rubber tappers sent into the Amazon to tap rubber trees. These recruits were often misled about the conditions they would face and were subjected to harsh living conditions, disease, and exploitation (Curtius, 2016).

During the 1960s and 1970s, developmental projects were implemented in the Amazon, bringing a fight for the land (Torres et al., 2017). The unheard voices during the military and developmental government need spaces to be heard. Therefore, from the 1970s onwards, the seringeires, organised in trade unions, began to advocate for their rights and for the creation of policies that would protect their livelihoods and the environment. Within the democratization of Brazil in 1985, the Amazon struggles became noticed internationally and nationally (See Chapter 7.2). Then, Chico Mendes became the emblematic figure for the unions, indigenous populations and Amazon conservation. His fight brought international attention when, in 1985, he took part in the creation of the Rubber Tappers National Council, making alliances with environmental organizations and introducing the concept of extractive reserves (Villas-Bôas et al., 2018). Sadly, in 1988, Chico Mendes was murdered, leading to increasing media attention on some of the *seringeires*, other extractive communities and indigenous issues. Extractivist reserves in Brazil were formally established in legislation through Federal Decree 98.897 in January 1990. This decree defined extractivist reserves as areas destined for conserving natural resources and sustainable use by communities that depend on them for their subsistence (DE N° 98.897, 1990). The struggle for the extractive communities is an ongoing process involving negotiations with the state and forging alliances with organisations to ensure traditional peoples' voice and decision-making power over their territories and resources (Villas-Bôas et al., 2018). The national and

international discourses positioned the seringeires and their fight in the scope during the 1980s and 1990s; however, currently, the discursive scope of these communities is shared with other stakeholders.

Trabalhadores Rurais Sem Terra **(MST).** Brazil has never had a successful land reform (Valente & Berry, 2015; Zeneratti, 2021), which has had several impacts on landless people and *camponeses* all over Brazil. During the 1970s, Brazil faced massive discontent and demanded land reform. To counteract this, the military government created the National Institute for Colonisation and Agrarian Reform (INCRA) and strengthened the discourse that the Amazon forest was a solution, supporting the military government discourse *"homens sem terra para terra sem homens."*(Torres et al., 2017) Nevertheless, the policy did not reach all the affected population. Therefore, in 1978, the MST took its first action in south Brazil, and in 1984, it was officially founded as a protest movement, expanding across Brazil and promoting land reform in rural areas (Valente & Berry, 2015). The MST's initial actions were characterized by land occupations, where groups of landless workers would occupy unproductive lands owned by large landowners, the *Fazenderos*. Throughout the 1980s and 1990s, the MST expanded its reach across Brazil, organizing thousands of families into settlements and encampments (Coy & Neuburger, 2009). The MST's activism contributed to the political climate that led to the inclusion of agrarian reform provisions in the 1988 Brazilian Constitution. The Constitution recognised the need for land reform and established the legal framework for expropriating unproductive land for redistribution, a significant victory for the MST and similar movements (Hammond & Rossi, 2022). By the mid-1990s, the movement had become a significant force in Brazilian politics, advocating for agrarian reform and social justice in many countries; this has led to increased scrutiny of Brazil's agrarian policies and has positioned the MST as a symbol of resistance against globalization and neoliberalism, influencing global discussions on land rights and social justice(Coy & Neuburger, 2009; Hammond & Rossi, 2022). Again, for this group, the national and international discourses positioned them and their struggles during the 1980s and 1990s; yet, the MST is no longer in the discursive scope it once was and now shares space with other subaltern groups.

Indigenous populations. A long and arduous struggle marks Brazilian Amazon Indigenous populations for survival, land rights, and cultural preservation since colonial times. However, during the 1960s and 1970s, the construction of roads,

dams, and mining projects in the Amazon led to the displacement of many indigenous communities and the destruction of their lands (Oliveira & Torres, 2005). In 1967, the National Foundation for Indigenous Peoples (FUNAI) was founded as a means of self-organisation, seeking recognition and a voice in the public scope (Instituto Socioambiental, 2024b). Since the 1990s, many researchers, NGOs, and media outlets have documented the region's indigenous socio-environmental challenges (Imazon, 2015a; Instituto Socioambiental, 2024b; RAISG, 2020). The strongly related interaction of the Amazon forest and the pressing matter of climate change has expanded the scope of Indigenous fights and knowledge. An often discourse presented is that indigenous peoples deeply understand their local ecosystems, which have developed over generations. This knowledge includes sustainable land management practices, biodiversity conservation, and the use of native species, which can be vital for climate adaptation and mitigation strategies (Procópio, 2009). Also, it presents the discourse that many indigenous communities are the guardians of vast forested areas, which are critical for carbon sequestration and species of animals and plants, safeguarding the forest and the planet (BenYishay et al., 2017). These discourses make indigenous communities current allies in protecting forests and helping avoid climate change. It also gives spaces for indigenous communities to be seen and heard.

All of these subaltern communities have been and are in the discursive scope. They have been oppressed and have been marginalised by other groups. Nevertheless, throughout history, the attention put on their struggles and fights has changed, and they have been more alienated in some moments than in others. Brazil's democratization in 1985 allowed nationals and internationals to see what was happening in the Amazon forest. The Rio Summit 1992 introduced the conversation about climate change and the importance of the Amazon forest to climate regulation (See Chapter 7.2). These dynamics and the activism from these marginalised groups gave them a voice to claim for their fights. During the 1980s and mid-1990s, the *Seringeiros* and MST had a significant impact that took relevance to national policies and international scope. Since the 1990s, attention has been paid to indigenous communities as allies to combat climate change and forest conservation.

This helps us identify the importance of discourses in power relations and how these power relations and discourses are not static but shifting over time. Furthermore, emphasize something previously discussed, the scope is often put

on traditional and indigenous communities and way less in hybrid contexts. Therefore, the next chapter will present the background of the study, the region, its inhabitants, and dynamics, as well as the methods and my position in the research while exploring the intersecting hybrid pluriversal contexts.
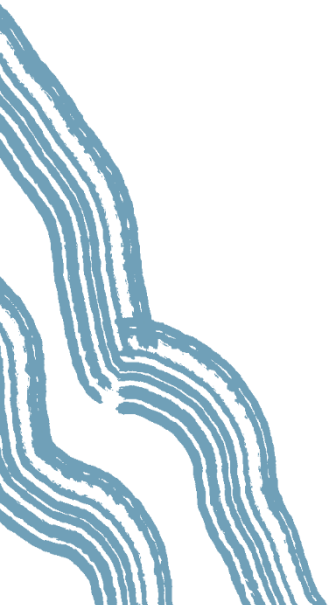
5   Background of the study

The study area comprises the Brazilian Legal Amazon, the state of Pará and the municipality of Novo Progresso, which represent critical focal points for understanding the socio-environmental challenges and opportunities of the Amazon region. By examining historical and current discourses on the region based on the historical context, geographical characteristics and socio-environmental dynamics of this area from a pluriversal perspective, we can gain valuable and often neglected insights into the complex interactions between human activities and environmental sustainability. This study delves into the municipality of Novo Progresso, in Pará, intending to recognise the hybrid pluriversal contexts that intersect.

However, to understand the work in the Brazilian Amazon, it is essential to know the entire background of the study. Therefore, below is the background of the study, which involves the influences for working in the Amazon, the methods and approaches used, the motives and my position as a researcher and person during this research process.

5.1   The case: The CLICCS project

This study emerges from the research project and Cluster of Excellence: Climate Climatic Change and Society (CLICCS), funded by the DFG, German Research Foundation. Several institutions and Universities are part of the project, such as the University of Hamburg, Max Planck Institute für Meteorologie and the Helmholtz-Zentrum Geesthacht, among many others. It encompassed seven years of projects and around 200 scientists. Its main objective is to develop assessments of which climates are possible and which are plausible. This includes topics such as deep decarbonization to reach the Paris climate agreement, the construction of self-consistent scenarios of future climate, case studies of sustainable adaptation scenarios, and develop stakeholder dialogues, among

many others (CLICCS, 2024). As it is a large project, it was subdivided into several areas and topics. The CLICCS-C2 area was developed to research sustainable land-use scenarios: Soil, biodiversity, water, food, and energy security. To fulfil this, the C2 was subdivided into four packages, and a framework was developed to identify the interconnections between topics and researchers. Six regions were selected to conduct research: Nepal, Nord India, Brazilian Amazon, Namibia, Sambia, and Hamburg metropolitan regions. Its objectives were many, but this research was framed on the C2 objective to explore possible and plausible land-use futures in rural areas (see Figure 1). The research and the thesis were constructed under the CLICCS-C2 framework and objectives, and I had the privilege of working in the Brazilian Amazon region. In Chapter 5.5, more on this topic and opportunity is elaborated.

Figure 1 CLICCS-C2 framework "Exploring sustainable land-use scenarios in rural case study regions
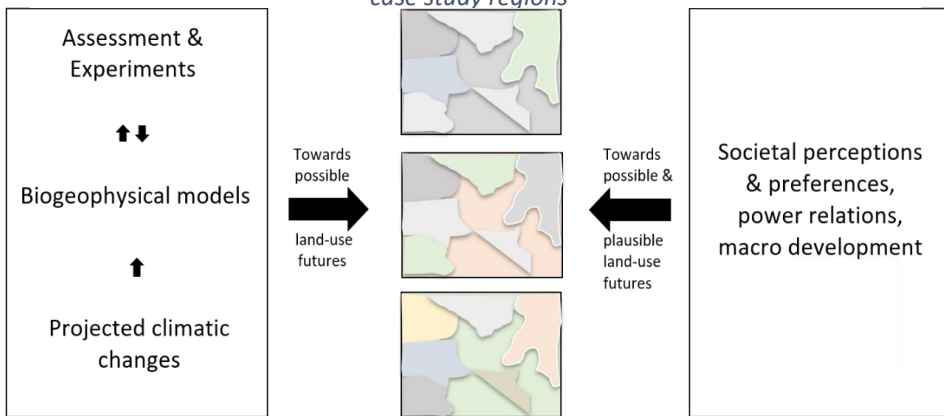
*CLICCS-C2 (2021)

5.2 The research areas: from the Brazilian Amazon to Pará and Novo Progresso

The Brazilian Amazon, often dubbed the "Lungs of the Earth," represents one of the most biodiverse regions on the planet, encompassing vast expanses of tropical rainforest, diverse ecosystems, and unique cultural heritage. Within this region lies the Legal Amazon, a designated area defined by national legislation; it spans several states and territories, including Acre, Amapá, Amazonas, Goiás, Maranhão, Mato Grosso, Pará, Rondônia, Roraima, and Tocantins (LEI No

12.651, 2012). Thus, the Legal Amazon Region encompasses approximately 60% of Brazil's total land area and is characterized by its dense tropical rainforests, diverse ecosystems, and rich biodiversity. Nevertheless, the Legal Amazon has a considerable population; according to the 2022 census, it reaches approximately 29,8 million residents (IBGE, 2023d). Notably, half of Brazil's Indigenous population (867,090) inhabit the legal Amazon, reflecting a growing recognition of indigenous identities and rights in the Amazon region (IBGE, 2023d; IBGE Noticias, 2023b). Another community is the *quilombola* population, which in the Legal Amazon is approximately 426,449, representing 1.6% of the region's population (IBGE Noticias, 2023a). Among these communities and populations are the previously mentioned populations in Chapters 3.2.2 and 4.1. This region is crucial in regulating global climate patterns, acting as a carbon sink and being the home of various plant and animal species (RAISG, 2020). However, the historical developmental and colonial process has put the region and its inhabitants in complex dynamic constellations and entanglements between survival, conservation and production (See Chapter 6). To understand these dynamics and look further for hybrid pluriversal contexts, this study deepens into the state of Pará and the municipality of Novo Progresso (See Map 1).

Within the Legal Amazon Region is found the state of Pará. It is located in the northeast region of the Legal Amazon. It is the second largest state, with a total area of 1,245,870.704 km² and the most inhabited within the region with a population of 8,902,302 (IBGE, 2023b). It stands out for its tropical monsoon climate and status as Brazil's largest cattle producer. With an average annual precipitation of approximately 2300 mm (Prado de Carvalho, 2023), Pará has become a focal point for agricultural activities, particularly cattle farming (Coy & Klingler, 2014). However, this agricultural expansion has come at a cost, experiencing some of the highest deforestation rates in the country and the Amazon Forest (PRODES, 2024). The dominance of extensive cattle farming, coupled with the encroachment of agricultural frontiers, has led to significant environmental challenges in the region (Coy & Klingler, 2014). As seen in Chapter 7, the agricultural production in the region is often blamed for deforestation, putting in the scope all those who work in cattle and agricultural production in the state. Therefore, in the search for hybrid contexts, this research aims to discuss the realities of agricultural producers from the state of Pará, a hotspot for biodiversity, colonization, developmental waves, economically driven decision-making, and pluriversal hybrid contexts entangling. To achieve this,

zooming more profound into the agricultural frontier and its inhabitants and dynamics was necessary.

Map 1 Legal Amazon, Pará and Novo Progresso
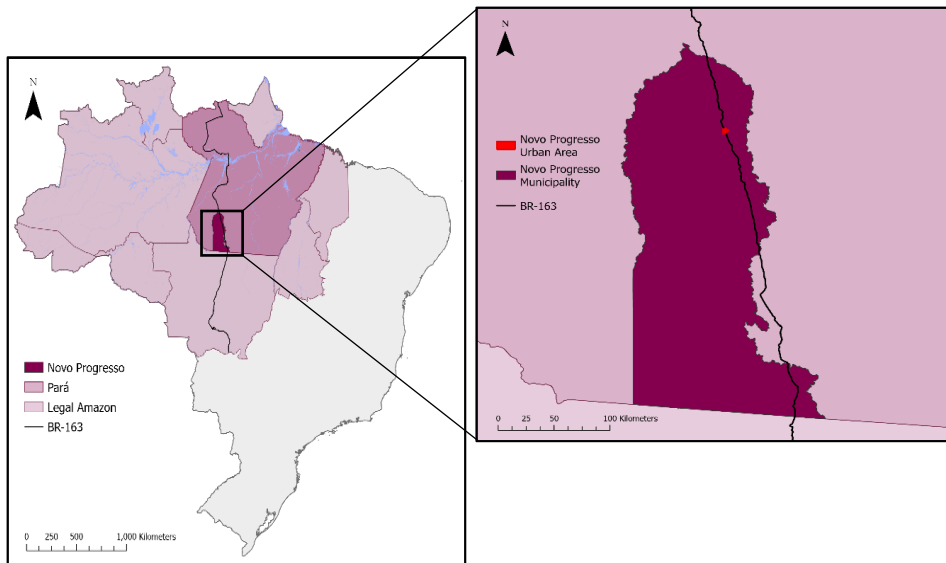
In the state of Pará is found the municipality of Novo Progresso. Novo Progresso is located in the peripheral southwest of Pará on the route of the federal road and export corridor BR-163 (see Map 1). The municipality covers about 38,162 km² and contains more than 33,500 inhabitants (IBGE, 2023c). The municipality's history is intrinsically connected with the Amazon resource extraction and developmental Brazilian projects (Araujo & Melo, 2008; Torres et al., 2017). The region was first inhabited by Indigenous communities and "riberinhos", who settled by the Tapajos River in the middle of the XIX century. By the 1950s, rubber tapping and mining extraction brought new inhabitants (Prefeitura Novo Progresso, 2023). Moreover, in the early 1970s, the Military government proposed a developmental and colonisation project for the Amazon region (Torres et al., 2017). Between 1971 and 1976, the initial phase of the BR-163 road project involved the clearance of approximately 1700 kilometres of forest to link the cities of Cuiaba (MT) and Santarem (PA). The BR-163 road aimed to link different critical areas of production and distribution while boosting the colonisation process, economic dynamic growth and border security (Rodrigues & Nahum,

2023). Disparate other areas of the Amazon, In Novo Progresso, this regularisation gave the opportunity not only for families to colonised and take over extensive land holdings and thus become large landowners, creating enormous migration and land issues, but also to strengthen the preexistent major environmental issues as deforestation, mining, and logging (Bandeira Castelo et al., 2020; Rodrigues & Nahum, 2023; Torres et al., 2017).

Moreover, by 2000, the BR-163 was established as a critical key commodity corridor, facilitating production and distribution and expanding the agricultural frontier (Deutsch & Fletcher, 2022; Rodrigues & Nahum, 2023), directly impacting the socio-environmental dynamics of Novo Progresso. To date, this progressive socio-environmental dynamic of agricultural expansion, illegal mining and logging, and resource extraction have placed Novo Progresso in the top 10 of the most deforested municipalities in the Amazon, with accumulated deforestation of 7.646,05 km² from 2007 to the date (PRODES, 2023). The expansion of soy and cattle production in the region has overcome the protection and conservation projects. However, Novo Progresso rural producers also engage with the land and forest, and live in their own interscting hybrid pluriverse context, as presented in Chapter 8.

Construction site on Novo Progresso

* Expansion of the municipal administrative buildings.
Photo taken during the field trip in Novo Progresso.

In the following chapters, we delve into specific aspects of the methods and approaches used during the development of this thesis.

5.3   Presentation of the methods

This thesis aims to contribute to the pluriverse in intersecting hybrid contexts. A multi-method approach was employed to achieve this goal, combining a literature review on scientific discourses, a media discourse analysis, and biographical interviews. Going through each step allowed this research to zoom in and search for a hybrid pluriverse in four steps. First, by identifying how scientific discourses framed pluriverse, stakeholders, and dynamics in the Brazilian Legal Amazon. Second, while conducting a traditional and social media discourse analysis for the state of Pará, allowing the understanding of what voices and in what contexts were marginalised. Third, explore hybrid pluriversalities contexts, conducting biographical interviews to recognise the intersecting pluriversal contexts. Finally, critically engaging with the results and presenting the pluriversal narratives of rural producers in an intersecting context with the universal world, media and scientific discourses about the Brazilian Amazon land and forest.

The pluriversal perspective, as stated in Chapter 3, requires the identification of the universal hegemonic perspective and then attend the pluriversality within other perspectives. In this case, a further step is introduced to approach the intersecting pluriversal contexts. Each methodology helps respond to the main objective while answering this research's practical questions, as explained below.

5.3.1   The systematic literature review

In Chapter 6, a systematic literature review was conducted to analyze the scientific knowledge production on the social and environmental dynamics of land use in the Brazilian Amazon region and their interaction with social and environmental (in)justice. Answering the questions: Do hierarchies in scientific knowledge production contribute to silencing subaltern voices and hiding a pluriverse approach when writing about Amazonia land issues? And if so, how? It went to three main steps.

1) **The data collection.** This literature review used the Web of Science (WoS), Scopus, and Scielo research engines. These databases are widely used in various scientific fields and institutions in European and Latin American academic contexts. The systematic literature review covered the period from January 1970 to February 2022. The query string for

article selection was based on our research objectives and definitions. The search query included terms such as "Amazon*" and "Brazil" to define the geographical region of analysis and "Just*" or "Injust*" to identify relevant articles related to (in)justice concepts (see Table 3).

2) **Exclusion and Inclusion Parameters:** In the second step, titles and abstracts of retrieved articles were screened to identify relevant articles. Articles were excluded if they did not meet specific parameters, such as relevance to the topic, peer-reviewed status, or inclusion of query string words. Articles meeting these parameters were selected for analysis.

3) **The Codification:** A coding plan was developed using MaxQDA to classify selected articles. Structural inequalities in scientific knowledge production were analyzed by examining languages used, reference types, authorships, and institutional affiliations. The main issues, problems, reasons, and solutions identified by the authors were characterized in each article. Additionally, the visibility of pluriverse approaches was analyzed by examining the integration of pluriversal concepts, geographical areas, methodological approaches, and stakeholder roles described in the articles.

Table 3 String query used for Chapter 6

String query	Database	Language
EN: (Amazon*) AND (Brazil*) AND (Just* OR Injust*)	Web of Sciences	EN
		PT
PT: (Amaz*) AND (Brasil*) AND (Just* OR Injust*)	Scopus	EN
		PT
	Scielo	EN
		PT

5.3.2   The social and traditional media discourse analysis

In Chapter 7, a discourse analysis on traditional and social media was conducted about the state of Pará to understand how the media frame stakeholders and socio-environmental dynamics in the search for unheard voices in social media. This chapter helps answer the following questions: What are the socio-environmental discourses about Pará's Amazon forest in social media and

newspapers? How are they configured? and Which voices are heard and excluded? The approach used to analyze discourse on forest and land issues in Pará, Brazil, from September 2020 to October 2021. It involved two main steps: reviewing articles from Folha de São Paulo and O Liberal newspapers, scraping tweets from the social media platform X, and, second, a qualitative analysis using MaxQDA to correlate data from print and social media sources.

1) **Journal data collection:** Daily journal reading, review, and article selection related to land and forest issues in Pará was meticulous and thorough. Each day was dedicated to searching for publications in Folha de São Paulo and O Liberal newspapers, meticulously scanning through articles to identify those pertinent to the predetermined topics. Then, the articles were scrutinized for relevance, ensuring that only those directly addressing forest and land matters within Pará were selected for further analysis. This process involved reading the articles and critically evaluating their content to ascertain their alignment with the research objectives and exclusion parameters. **X (Twitter) data collection**: The scraping process and Twitter collection focused on gathering real-time insights and opinions regarding land and forest issues in Pará from social media users. Using the X API 1.0, data from the mentioned time frame was extracted from social media platform X, formerly Twitter, explicitly focusing on tweets related to the designated topics. This process involved capturing diverse perspectives, opinions, and conversations circulating within the digital sphere, providing valuable insight into the public discourse surrounding land and forest dynamics in Pará.

2) **Codification and analysis:** The last step involved the analysis of this vast dataset using MaxQDA software. The software delves deep into the content of the articles and social media posts, extracting key themes, discourses, and sentiments related to land and forest issues in Pará. Recurring patterns, emerging trends, and contrasting viewpoints were identified through a systematic coding process in traditional media articles and social media conversations.

5.3.3 The biographical semi-structure guiding questions

In Chapter 8, a biographical semi-structured interview was conducted to explore the existence of interlinkages in hybrid contexts within rural producers in the Municipality of Novo Progresso. This chapter answers the following questions: How do rural producers' historical and present positioning and narratives shape land use and management on the agricultural frontier in Novo Progresso? The interviews were conducted between March and May 2022. The chapter is organized into two main steps: first, developing the biographical semi-structured questionnaire, and second, data codification and analysis using the software MaxQDA.

1) **Biographical Semi-Structured Interviewees:** A biographical semi-structured questionnaire was devised for rural producers in NP to capture and comprehend local narratives (see Figure 2). The interviews explored biographical and historical topics, family migration history, relationships with stakeholders, and perceptions of land and production (pluriversal contexts) (see supplementary material). The data collection involved displacing in a car for several hours and looking for rural producers who would like to be interviewed. This topic is further explored in Chapter 5.5.

Figure 2 Semi-structured guiding questions used on field trip

2) **Characterization and Codification:** A coding plan was developed using MaxQDA software to categorize rural producers and understand similarities and differences in their narratives. The codification process involved two main steps:

- Exploration of historical intentions and migration history, factors influencing arrival and first impressions of the region, and
- Characterization of current factors shaping socio-environmental and economic dynamics

3) After identifying correlations in the narratives, the rural producer's narratives were contextualized. Their histories, stories, and narratives on land and forest based on the complex interlinkages of their narratives with other interviewees and the richness of information provided during the interviews were analysed.

5.3.4 Critical engagement with intersecting hybrid context

In Chapter 10, a critical engagement with the results was made to bring to the discussion the intersecting hybrid contexts of rural producers within the scientific and media discourses and the local socio-environmental dynamics. This aimed to answer the following questions: How does hybrid context navigate its unique position between traditional and modern, as well as local and global influences? How can the narratives and experiences of intersecting hybrid contexts contribute to exploring the pluriverse?

5.4 Motivation: Recognition of intersecting hybrid contexts

During my Master's studies, I already worked in Brazils; however, I had never conducted research in the Brazilian Amazon. When I saw the call for the CLICCS position, I only saw "research assistant" in the headline, which aimed to conduct empirical research in the Brazilian Amazon and/or India. It was the last day to apply for the call, so I did not hesitate and made the application. Since I first was in Brazil for my master's work, this place has been full of memories and remarkable encounters.

I moved to Hamburg and joined the CLICCS project in October 2019. My first impressions towards the organization and the project were good. I was coming from a previous work based on the United Nations sustainable development goals (SDGs) and found the research environment similar. Happily, apart from joining the CLICCS project, I also joined the research group Critical Geographies of

Global Inequalities (AG.KGGU or the AG) from the Institute of Geography at the University of Hamburg. The members of this working group introduced me to the decolonial and postcolonial thinking. Based on a feminist perspective, the working group members are scholars, activists, and persons actively engaging and intersecting with decolonial topics and approaches. Their work on topics like water, land, territory, rurality, urban studies, political ecology, and queer and feminist studies, among others, from critical decolonial and feminist perspectives, shaped the methods, thinking and approach of this thesis.

In 2019, between November and March (cold, winter and dark times in Hamburg), I studied different areas of the decolonial and postcolonial studies. In between them, I found the pluriverse. The pluriverse for me, during the first months and even years of the thesis, was that elaborate academic word full of mysticism. I spent much time looking for a way to understand it better and mainly define it. One afternoon, during the AG weekend (a yearly activity to explore new and current AG topics in depth), I presented to the AG the current status of my thesis, keeping in mind one main question: What is the definition of a pluriverse? After a couple of minutes of discussion about the question and my resistance to finding a response, my colleague Katrin Singer responded to me – Carlos, maybe the critical part of the pluriverse is not to have a primary definition but to be open for exploration and adoption by other worlds. After writing this thesis introduction, this question and the response seemed more obvious, but at that moment, I felt I was getting closer to understanding what the pluriverse is about.

A couple of months later, I started perceiving (while conducting Chapter 6) that many of the assessments of the pluriverse were directed to visibly highly distant worlds from the Universal world. Most of the time, researchers refer indigenous and traditional communities to understand the pluriverse. However, this opened a question: Where am I in the pluriverse? Do people like me (Latin Americans, mestizos, hybrid contexts, grown closer to the one-world view) fit in the pluriverse? The pluriverse became a personal matter.

Furthermore, I aimed from the beginning to empirically explore as much as possible the pluriversal Brazilian Amazon; the region was defined with the aid of my supervisor after identifying all the historical socio-environmental dynamics, entanglements in the region, and the possibility of exploring the intersecting hybrid contexts. However, COVID-19 spread around the globe just before my first fieldwork. A sense of uncertainty was present in my research (obviously, in

many realities), which drove this research to be reorganised several times. To take action after the first six months of the pandemic, the idea of Chapter 7 evolved as a way to connect as much as possible with the Brazilian Amazon and the region, even from a distance.

Finally, in March 2022, it was possible to travel to Brazil. I had the opportunity to be in the region for six months, which allowed me to connect many questions with answers and come back to Germany with many more questions after conducting the research. Chapter 8 was developed from this fieldwork.

The motive for conducting this research changed and adapted while growing into the context of Brazil, the pluriverse, and personal thoughts and interactions; however, the opportunity to work in the Brazilian Amazon intersected with my understanding of the pluriverse and the aim of exploring the intersecting hybrid contexts (like mine).

5.5 Positionality: reflecting on personal encounters with the research

The previous chapters present and discuss the region, methods, and motivations for doing this research work. However, I found it politically and ethically essential to reflect on myself as a researcher, conducting research in a foreign country, coming from a European University to a context I had yet to discover (Boer Cueva et al., 2023). In writing this, I must reflect that these actions have already implicated the research project in a dynamic of re/production of power and colonial dynamics and must, therefore, be critically analysed (Gani & Khan, 2024).

Positionality refers to the social identities and power dynamics that shape a researcher's perspective and influence knowledge production (Boer Cueva et al., 2023; Homan, 2023). It reflects our background and is shaped by our various intersecting social identities, such as race, gender, class, sexuality, cultural background, and geographical location (Homan, 2023). These identities influence how we understand and engage with the world, affecting our knowledge, interactions, perspectives, and practices (Boer Cueva et al., 2023; Homan, 2023; Takacs, 2003). Homan, 2023 argues that research work is *"shaped by what I* (we)

know and what I (we) *know is shaped by who I am* (we are) *and what I*(we) *have experienced."* This perspective challenges the traditional notion of objectivity in research, which often overlooks the influence of the researcher's identity and context in practice. Instead, positionality advocates for a reflexive approach that acknowledges the complexities of power relations and the historical context in which research occurs (Hausermann & Adomako, 2022; Takacs, 2003). In positionality reflection, Takacs (2003) raises the question of how positionality shapes research; this will be discussed in this chapter.

My background. A colleague from the AG once told me that writing about my background is not the essential part of positioning, but reflecting on how this background intersects with the research is. However, to centre on the discussion, I will generally describe what I think is important to know.

I am a Latin American male, I identify, and I am seen as a male. I had never thought about it, but once, someone in Germany told me I was brown. While I lived in Mexico, I never had to think about what colour I was until then. I did not take it as something bad, but it strengthened my idea of how I am perceived in the universal world. Also, I had never considered my colour before, and this talks about how privileged I was while growing up. Regarding my privilege, it depends on the comparison with other people. Once, a Sirian friend told me not ever to mention how privileged I am or was in front of white European or Northwestern people, as this diminishes the word and puts the concept of privilege in the same circumstances for all, which is not. I grew up and living with all my nuclear family (father, mother and sisters); I had food thrice daily and attended a private school in Mexico, where I learned English. I grew up in a middle-class, academically educated environment. Today, I am a 35-year-old PhD student aiming for a higher degree; I am a Latin American working and studying, learning and acting on decolonial studies in a former colonial and Northwestern University.

5.5.1 I work with the criticism, and I criticise what I work on

As presented in Chapter 5.1, in 2019, I was selected to be part of the CLICCS-C2 project. Apart from the project, I landed in a lovely, critical, and authentic as the AG. While the CLICCS project is based on natural sciences research, strictly objective and rational, the AG allowed me to explore feminist decolonial approaches and perspectives. Navigating these two postures was complex during the first years.

The first part of my thesis was five months before the COVID-19 pandemic. During this time, I engaged with decolonial, postcolonial and pluriversal texts and engaged in discussions to structure the thesis project. I had many conversations during this time, but one with my colleague Katrin Singer evolved into a mind map (see Figure 3). This mind map presents the power relations in academia, putting me, as a PhD student, in an intricate entanglement within colonial practices and the search for socio-environmental justice, which was my topic. It starts (upper left) by expressing how scientists in Europe emerge with ideas from Europe, write a project, and receive funding for its application. Then, (centre top) PhD students are hired to fulfil the project objectives while identifying research gaps in places where these PhD students (probably) have not been yet or do not know the full context. Therefore, besides having the required skills, searching for people who know the contexts and/or the languages is prioritized in the PhD calls for applications. Afterwards, (top right) the PhD students go to the study region for concrete objectives planned in Europe and then fill gaps often identified in literature reviews. Thus, in many cases, these objectives and gaps are not the ones that are primary for local communities in the research areas (See Chapter 6).

Some critique questions emerged during the discussion, but one resonated for most of my research: Why not take the time to go to the proposed regions, find a research gap, and then write a research proposal?
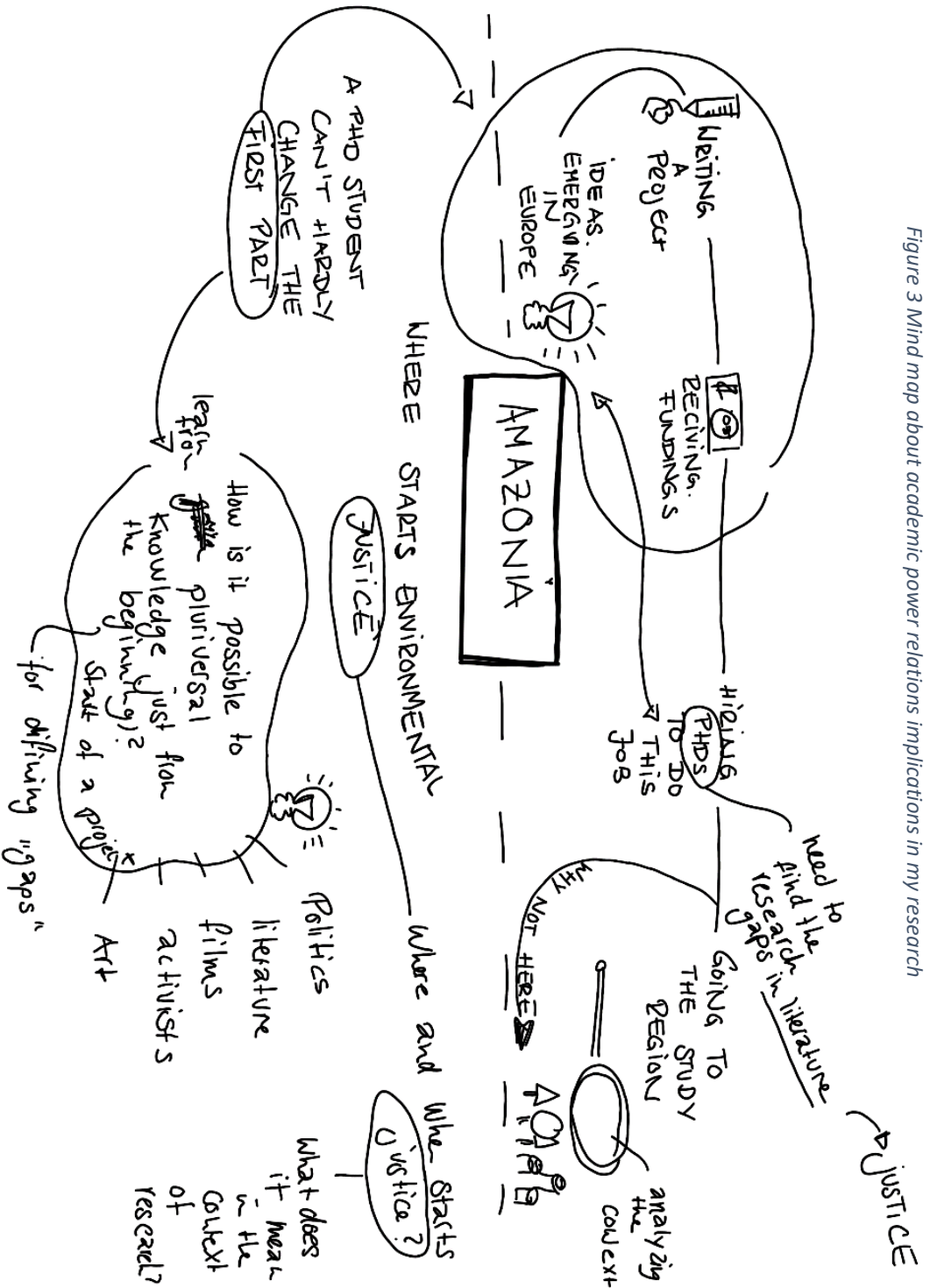
Figure 3 Mind map about academic power relations implications in my research

My father used to say that luck is a combination of preparation and being at the right place at the right time. I like to think I was lucky to be selected to work in the AG and Brazil. However, I must recognise that being Latin American, knowing Portuguese, and being educated most probably helped me on the PhD vacancy call. In addition, this conversation and mindmap helped me understand the structure I was participating in, shaping some of my perspectives and interactions and my position as a PhD within the CLICCS project.

5.5.2　A small mention because it needs to be addressed

I would also like to reflect on my situation during the COVID-19 pandemic. It is important to mention that this pandemic started almost as my PhD and has played a role in many research decisions. Everything was taken to a standstill during this time, including my research. During this time, I had to consider what to do concerning my thesis, as travelling to the Amazon was impossible. I have to reflect that, like many people in the world, I was afraid in a foreign country, without my family, and with uncertainty about what to expect. I also lost friends and family. However, this experience also shaped my research and my position in it. I was in a situation where I did not have to worry about my work; I was in company with my partner, I had the physical instruments to keep working and my supervisor's support.

5.5.3　My place in the fieldwork

From March to July 2021, I conducted my fieldwork in Brazil. There are two situations that I would like to address in this subchapter. The first unfolded from days before until my arrival in Novo Progresso, and the second and, more importantly, the interactions and the development of the research in Novo Progresso.

Figure 4 Perception, pre-concept, pre-judice

Perce p ción

Con cep to

Juicio

¿Como se forman?
¿Como afectan el desarrollo
de la investigación?
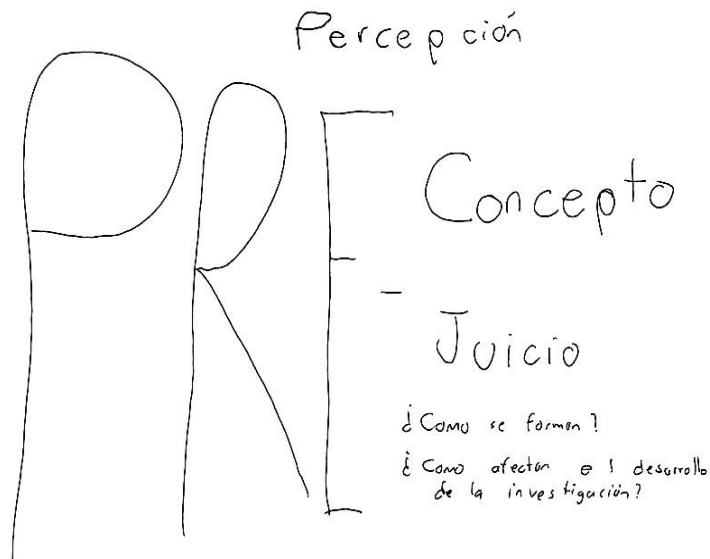
Drawing done during my fieldtrip base on the constant
discourse on violence in Novo Progresso

Before Novo Progresso. Before arriving in Novo Progresso, I decided to go to several Institutions and Universities in Brazil to get a perspective from Brazilian experts who knew and had worked in the area. Using my institutional email from the University of Hamburg, I contacted some of them and was able to have calls and visit them at their work. The reception was always polite and with helping intentions. I started with a Zoom call with staff from the World Wild Foundation in Rio de Janeiro, and then I was able to visit geographers from the Federal University of São Paulo and staff from the Instituto Socioambiental, also in São Paulo. From there, I travelled to Belém, the capital of Pará, where I met with academics from the Federal University of Pará and the Emilio Goeldi Institute. Finally, I visited geographers from the Federal University of Western Pará, with whom I had my last academic interaction before travelling to Novo Progresso.

First, of all these interactions, it is essential to mention that if it were not for the CLICCS project, financing the visit to all these places, Universities, and Institutions would not be easy. Secondly, the reception was always friendly as I introduced myself as a PhD student at the University of Hamburg. So I was often asked about my life in Germany and the German language. Finally, one of the

things that marked the research was the constant concern of most people about my visit to Novo Progresso. I was repeatedly told that Novo Progresso was a place with much violence and that I, despite looking like Brazilian[3] (because of my features), was a foreigner. Although I spoke the same language, Portuguese, my accent was different, which could put me in difficult circumstances in the region. For instance, I was advised not to rent a car (which was necessary to conduct the research) as it would be easy to steal it. This led me, at times, to rethink whether I should go to Novo Progresso and whether it would be in my best interest (see Figure 5 and 6). This caused me to postpone my arrival in Novo Progresso for at least 3 to 4 more days. These interactions and affirmations affected my fieldwork because of who I was and how I looked and spoke, causing insecurity, fears and prejudice towards future encounters in Novo Progresso. Conversely, presenting myself as a student from a German university opened doors for discussions.

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[3] I do not consider there is a Brazilian look a like. Due to migration dinamics and mestizism, almos everyone could "look like Brazilian".

Figure 5 Insecurity, fears and loneliness

Drawing done during my fieldtrip representing my
thought and feelings during the research
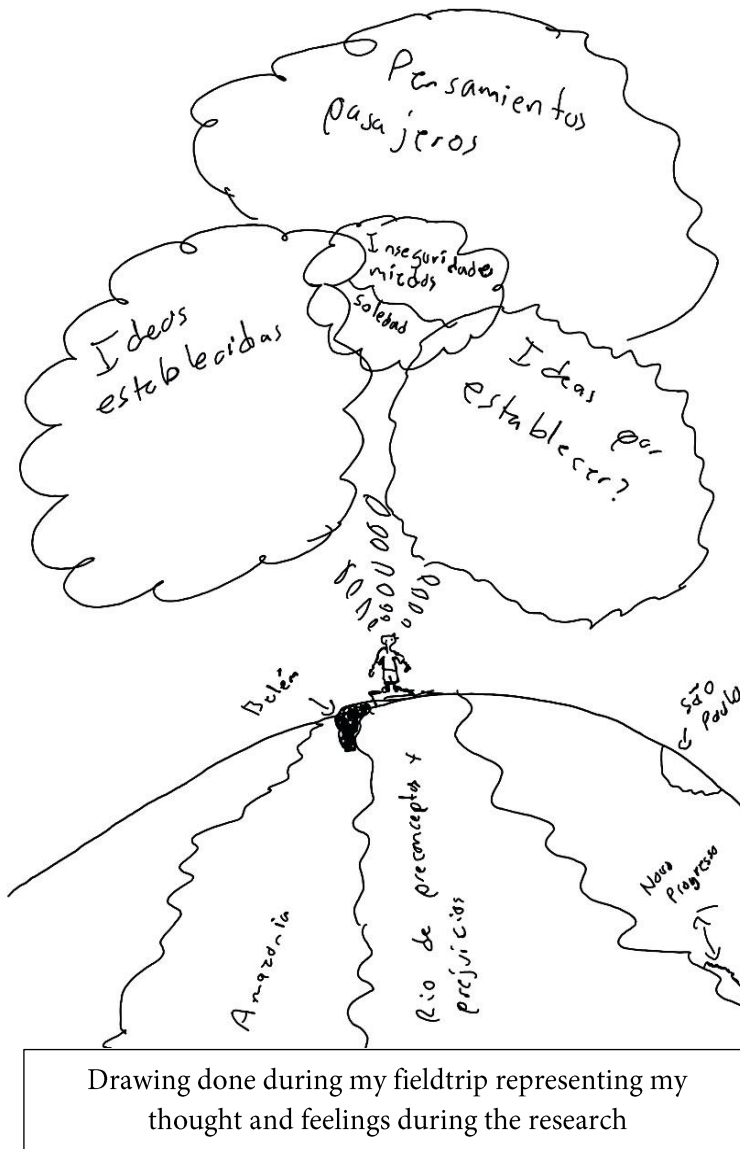
Interactions in Novo Progresso. On my arrival in Novo Progresso, the fears did not disappear since its geographical location made the municipality difficult to access. At that time, the road (which is not in the best conditions) was the easiest way to access or leave (See Chapter 8). I divided the fieldwork into three moments: the first was my arrival alone in Novo Progresso and the establishment of the first

relationships; the second, when my advisor, Martina Neuburger, travelled to Novo Progresso to get to know the area better, and the third with the arrival and departure of my colleague Lea Schröder when the largest number of rural producers were interviewed.

Figure 6 The comunidad "São Jose"

The first approaches to administrative and organisational institutions were made during the first part of my fieldwork. Again, the fact that I introduced myself as a researcher from a German university opened the doors to governmental and organisational institutions. I contacted the *vereadores* (municipal deputies), who, knowing that I came from Germany, did not hesitate to invite me to events organised by them and by the city council. In the same way, I took the opportunity to tell them that my thesis advisor (a German professor) would be coming in a few weeks to meet them and talk to them.

Figure 7 Political events in Novo Progresso

With Martina's arrival in Novo Progresso, invitations to municipal events increased, as did interactions with

politicians (see Figure 6). Also, because we had a car, we could initiate interactions with rural producers in the area. Initially, the vereadores took us to the settlements, where we established the first conversations with rural producers. In addition, in the following days, we decided to travel alone to the settlements to talk to more people and to see if the way of relating to them would change if we no longer went with government representatives. This did not happen, and we managed to meet small producers who assured me that I could return in the coming weeks to talk to them. From the moment Martina left, I did not meet *vereadores* again until the last week of my field trip.

On Martina's last day in Novo Progresso, Lea arrived. The next day, we decided to go alone to the settlements and knock on doors. Getting anyone to talk to us the first few days was challenging. The reception was negative when we returned to the rural producers who had opened doors for us with Martina. On the third day, we met a family who decided to talk to us when they found out that we came from Germany and that Lea was German. This was a significant turning point in the research since this family, descendants of Germans, opened the doors to many other conversations in their close circle of friends and neighbours (also rural producers) since most of them identify as descendants of Europeans. The fact that we introduced ourselves as coming from Germany or that we were German changed the dynamic and led to many conversations with them. I never introduced myself as German; nevertheless, I started to be known as the German, even after Lea left. Another frequent question or assertion from the rural producers was to insist that we were a couple, which they thought was very appropriate since, from their perspective, the research we did was best done in pairs. Furthermore, they also considered us to be Catholics, the same religion they share. Many interactions happened during those days. A very present anecdote was one Sunday when we were invited to the *comunidade* (recreation area; see Figure 7 and [Chapter 8.6.3](#)). That day, the father of the family, who welcomed us for the first time, introduced me to one of his best friends. He said - this is Carlos, the German. His friend's answer was, - you are the blackest German I have ever seen; after that, he shook my hand and smiled.

When Lea left, I continued to conduct interviews in the field as interactions continued to be fluid. Much of this I credit to the fact that rural producers have excellent connectivity among them. The use of applications such as WhatsApp alerted the vast majority to our presence. However, during all this time, the fact that they talked to us did not mean that they were always honest with us. Talking

about the forest or climate change was forbidden, which was an absolute constraint to continue the conversation, as it is a sensitive topic in the region. Many questions regarding the production and productivity of the countryside were also avoided due to the huge land speculation that exists in the region.

Figure 8 Knocking doors (and fences) in Novo Progresso

All these dynamics had an impact on the development of the field research. Fear was a constant factor during the development of each interview. Not knowing how we would be received was a constant concern (see Figure 8). The use of a German University affiliation, the locally perceived high authority status of a German Professor, and the fact that we (Lean and I) were identified as partners, Catholic and German, shaped the interactions and dynamics of the research. I suppose that "coming from Germany" or "being German" might show how local knowledge, experience, achievements, creativity, ontologies, epistemologies, etc. are underestimated. In many cases, there was a strong emphasis and a sense of pride in their "non-Brazilian" surname when presenting themselves.

We (including myself) have been shaped to marginalise our own self, and we avoid recognising all that we are and have in our context in Latin America; this refers to our roots, knowledge, experiences, ontologies and epistemologies that shape us as people. Thus, I think colonial discourse has (and continues to) shaped us to believe that everything that comes from the Northwest is better (than ours) and more valuable (than ours).

I cannot know what would have happened if these (colonial) dynamics during the field trip had not developed in the field. However, I think it is worth mentioning

and reflecting on how these power relations and colonization dynamics and discourses continue to influence local perception and empirical research.

SECTION II
Publications

6   Pluriverse in science: discourses of Amazonian land-use change and socio-environmental (in)justice.

Carlos Tello and Martina Neuburger

Abstract

In the Brazilian Amazon region, social, economic, and political changing structures have increased the pressure on land, generating inequalities for the region's most vulnerable residents. Simultaneously, scientific knowledge production has increased and documented the region's different realities. This document presents a scientific discourse analysis of land-use change in the Amazonian region and its interaction with socio-environmental (in)justice, considering the pluriversal perspective. We respond to the main questions: Do hierarchies in scientific knowledge production contribute to silencing subaltern voices and hiding a pluriverse approach when writing about Amazonia land issues? And if so, how? A systematic literature review was conducted using the scientific dissemination platforms Scielo, Scopus, and WoS. The results show a disproportionate representation of some stakeholders, and some states are used as near-total representatives for the Amazonia region. Furthermore, consideration of pluriversal perspectives in the articles does not guarantee high sensibility for heterogeneity of local contexts or for making subaltern voices heard.

Zusammenfassung

In der brasilianischen Amazonasregion haben die sich verändernden sozialen, wirtschaftlichen und politischen Strukturen den Druck auf das Land erhöht und Ungleichheiten für die vulnerabelsten Bewohner*innen der Region geschaffen. Gleichzeitig hat die wissenschaftliche Wissensproduktion zugenommen und unterschiedlichste Realitäten in der Region dokumentiert. In diesem Dokument wird eine wissenschaftliche Diskursanalyse des Landnutzungswandels im Amazonasgebiet und seiner Wechselwirkung mit sozio-ökologischer (Un-)Gerechtigkeit unter Berücksichtigung einer pluriversalen Perspektive vorgestellt. Wir antworten auf die Fragen: Tragen Hierarchien in der wissenschaftlichen Wissensproduktion dazu bei, subalterne Stimmen zum Schweigen zu bringen und einen pluriversen Ansatz beim Schreiben über Landfragen in Amazonien zu verbergen? Und wenn ja, wie? Hierfür wurde eine systematische Literaturrecherche unter Verwendung der wissenschaftlichen Verbreitungsplattformen Scielo, Scopus und WoS durchgeführt. Die Ergebnisse zeigen eine überproportionale Repräsentation einiger Interessengruppen, und einzelne Staaten werden als nahezu vollständige Repräsentanten für die Region Amazonien verwendet. Darüber hinaus garantiert die Berücksichtigung pluraler Perspektiven in den Artikeln keine hohe Sensibilität für die Heterogenität lokaler Kontexte oder für die Berücksichtigung subalterner Stimmen.

Keywords: Discourse analysis, knowledge production, land-use, pluriverse, social geography, socio-ecological justice

6.1   Introduction: Pluriverse perspectives on Amazonian socio-environmental dynamics

Within dominant global political and scientific discourses on land-use change and climate change, Amazonia is described as (an untouched) native forest and 'green lung' of the world's climate. Consequently, there is a widespread call for the international community to safeguard this region. Land-use change and drivers for land-use dynamics have been analysed in a wide range of scientific articles by modelling physical and ecological factors and their interconnectedness with agriculture, cattle ranching and forestry Among the scientific articles focused on the region, some use Integrated Assessment Models procured by international organisations, such as IPCC and IPBES, to try to estimate future

scenarios and explain rationales of farmers in the Amazon region (Klatt et al.,
2018; P. Smith et al., 2019). However, these models use economic and
productivity dynamics, tending to leave behind aspects of historical
embeddedness, social inequality, land tenure and power relations. Since the
occupation and settlement of Amazonia by the Portuguese colonial power,
processes of frontier expansion have accompanied Amazonian land conflicts,
triggering land-use changes (Mueller et al., 1994; C. S. Simmons, 2004).
Marginalised and subaltern groups like indigenous peoples, *posseiros*, and
ribeirinhos, among others, have been excluded from land rights, expelling them
from the areas they have occupied before (J. A. Fraser, 2018).

In an increasingly interconnected world, science is pivotal, guiding our
understanding of natural and social phenomena and dynamics while presenting
and driving decisions, innovation, and solutions to some of humanity's most
pressing challenges (Ahenakew, 2016; V. de O. Andreotti et al., 2015; Robinson,
1992). However, within the production of scientific knowledge, there has long
existed a hegemony in which the Western perspective disproportionately
dominates the discourse (Ahenakew, 2016; Stein, 2019). This dominance has led
to a limited representation of diverse cultures, with far-reaching implications
(Leff, 2017; W. Mignolo, 2007; Querejazu, 2016). For instance, according to
Petzold et al. (2020), there is a lack of internationally visible and recognised
scientific studies that consider socio-environmental justice and indigenous or
local knowledge in their results on socio-economic interrelations with climate
change and future scenarios, respectively.

Against this background, this article challenges dominant scientific debates on
land-use change in the Amazonian context. It searches whether these debates
ignore socio-environmental conflicts by not considering plural voices when
talking and writing about social and environmental dynamics and visions of
possible and plausible futures in the context of climate change. In addition, it
explores whether scientific debates and justice issues are mostly ignored or, at
most, mentioned as a future duty to be worked on. We follow the current multi-
epistemic (decolonial - pluriversal) debates on how to consider social and
environmental justice issues, integrate and avoid silencing indigenous and local
knowledge when assessing vulnerability to climate change (see examples on
Kothari et al. (2019)).

This article explores the dominant scientific discourses on land-use change and socio-ecological justice in the Brazilian Amazonian region and the blind spots concerning subaltern visions of past, present and future. In order to identify the different scientific approaches and practices generated in and for the region and disseminated in the 'Western' and Latin-American scientific community, this article first explores power relations within peer-reviewed scientific knowledge production and concepts of decolonial pluriverse thinking. After a short introduction to relevant dynamics in the Amazon region and the presentation of the applied methodology, we perform a quantitative and qualitative analysis of scientific articles on Brazilian Amazonia, specifically on land and forest dynamics related to environmental (in)justice issues. Finally, we provide a qualitative analysis by identifying the scientific conceptualisations of socio-environmental conflicts in Amazonia and the relevance of the pluriverse approach focusing on (in)justice and subaltern voices.

6.2   Conceptual framework

Our objective is to answer the following questions: Do hierarchies in hegemonic scientific knowledge production contribute to silencing subaltern voices and hiding a pluriverse approach when writing about Amazonia land issues? And if so, How? For this, we: i) Examine the historical evolution and framework of scientific knowledge production and the prevailing scientific discourses regarding land-use changes in Amazonia. ii) Identify if other forms of knowledge and socio-environmental justice issues are addressed or overlooked. We link these observations to the concept of pluriversality because it offers a decolonial theoretical-conceptual basis for exploring the importance of debates about socio-environmental justice and marginalised epistemologies.

6.2.1   Dominance structures in scientific knowledge production

First, we consider scientific knowledge production as one of the crucial arenas where ontologies are negotiated. It is where the proliferation of knowledge starts and – sooner or later – becomes dominant in society, economy and politics. Although Western scientific knowledge represents only one of the diverse ways of knowing – e.g. social learning, everyday knowledge, religious doctrine, mythology, oral tradition, etc. – internationally, science (and its scientific method) is recognised as objective, analytical, logical, rational and compelling,

thus as 'true'. Consequently, science became the most robust way of generating knowledge and accessing 'truth' under the universal episteme (Querejazu, 2016). As it follows the ideas of the Enlightenment in Europe and its colonial expansion (W. Mignolo, 2011), the universal scientific knowledge tradition – which, from now on in this article, we are going to call 'Western' – entails a system ordered by 'universal' rationality, or reality, promising epistemic authority, certainty, and predictability. Seeking technical and scientific solutions (Ahenakew, 2016; Stein, 2019), this Eurocentric and Western system naturalises human supremacy over other beings, such as of white supremacy over indigenous, black and racialised communities (Ahenakew, 2016; V. Andreotti et al., 2018; Daigle, 2019; Stein, 2019). Consequently, the knowledge produced by the 'universal world' neglects and works against the theoretical contributions of other perspectives, making invisible these other knowledges and causing more inequalities and injustice (Leff, 2017; Querejazu, 2016).

As non-European, non-Western ways of knowing the world are marginalised and delegitimised simultaneously, the invention of the internet facilitated rapid knowledge exchange within the last decades. However, historically observed inequalities in the invisibility of non-Western scientific production are reproduced by unequal access to digital infrastructure – the so-called digital gap – and financial support by public and private research funding organisations (UNESCO, 2015). Although expenditure on research and development sectors grew in low- and middle-income countries from PPP$ 230 billion in 2007 to PPP$ 450 billion in 2013, their share remains at 30 per cent of world expenditure (UNESCO, 2015). This ratio almost exactly translates to the share of publications– registered in 2014 in Thomson Reuters' Web of Science Citation Index Expanded. Worldwide, North America and Europe alone were responsible for almost 70 per cent of all publications in the same year (UNESCO, 2015). Furthermore, the gap between upper-middle-income, lower-middle-income, and low-income countries is relatively high, with research and development expenditure of PPP$ 156,4 per capita in the former and PPP$ 26,6 per capita or less in both latter categories (UNESCO, 2015). These numbers show immense inequalities in scientific production and communication (Petitjean et al. 1992 p. 523, Alatas 2003, Weingart 2006). Brazil plays an exceptional role within the global south due to the fact that the first academic institutions were already founded in the 16th century by the Portuguese colonisers (Marini, 1994; Petitjean et al., 1992). Nevertheless, at the end of the 19th century, Latin American

scientists mainly linked their ideas to European classical authors and moved their perspectives to US-American authors in the 1920s and 1930s. Only in the 1960s – with the increasing exchange within the continent – did Latin American science emancipate, and since then, produce independent and self-reliant theoretical concepts and own scientific discourses (Hountondji, 2009; Marini, 1994; Petitjean et al., 1992).

6.2.2   Pluriverse thinking as a response to the "universal world."

As a response and counter-reaction to the still existing dominance of Western science and ontologies, pluriverse thinking was born. It is a epistemology of the global south , specifically a Latin American one, which recognises the multiplicity of 'unique worlds' and their ontologies (W. Mignolo, 2007). The explanation of the pluriverse is both a critique of the Western and/or Eurocentric 'universal' world assumption and an affirmation of the various ontologies and the meaning of those ontologies' political and ethical implications. Conway & Singh (2011) define the dominant 'universal world' as a unitary ontology that believes the universe is one that, within single modes of thinking, is knowable on a global scale and is therefore manageable and governable in those terms. In addition, the way knowledge is produced (Western scientific knowledge) differentiates what is accepted as existent and real and what is a product of fantasy, belief, dreams, etc. (Querejazu, 2016). Thus, knowledge production/epistemologies are directly interlinked with ontologies (philosophical study of being) and affect rationales, action, and policy-making, among others (Ahenakew, 2016). Consequently, in the context of Western scientific are therefore accepted as real. In contrast, Escobar (2004) characterises the inclusive logic of pluriversality and describes the pluriverse as: "a medium for one-worlders to make alternatives to one world plausible and connect with those other worlds that threaten the one-world story". Hence, the pluriverse does not want to replace any knowledge system but to establish a dialogue and an exchange among the existing epistemologies in the world (Zuckerhut, 2017). It also recognises the presence of several dimensions that are somehow interconnected: the natural, the human, and the spiritual, for example. Therefore, to assume the pluriverse as an ontological starting point, it is necessary not only to tolerate diversity but also to understand the constituted existence of many universes, many types of worlds, many ontologies and epistemologies, and many ways of experiencing these many worlds (Querejazu, 2016). Most recently, some non-Western concepts gained consideration even in Western scientific debates, for instance, the Andean concept *'Buen Vivir'*, the

'Ubuntu' concept of Southern Africa or the pluriverse thinking of the Zapatista movement. The fact that pluriverse concepts gain consideration in influential scientific journals and debates may be a result of the move of several pluriverse and decolonial scholars to universities in the United States of America (USA)– Arturo Escobar, Walter Mignolo, Aníbal Quijano, Ramón Grossfoguel, Nelson Maldonado-Torres, Gloria Anzaldua, etc. – where access to globally dominant scientific discourses is eased. Nevertheless, as explained by Moosavi (2023), neither origin nor self-declaration frames decolonised and pluriversal scholars but rather the process of challenging the colonial Westernised knowledge production and procuring the pluralisation of knowledges and ontologies in and out of academia. Moreover, scholars of pluriverse and decolonial concepts like Donna Haraway, Julie Cruikshank, Sebastian Garbe, the Orangotango and Kartattack collectives, among others, try to decenter 'Western science'. They, for instance, interate into their texts perspectives of subaltern groups (integrating them as authors), try to understand concepts of non-scientific epistemologies (*Cuerpo-territorio, Sentipensar etc.*), and use research methods that undertake to capture other ways of knowing (creative, artistic methods). However, a continuous struggle is the translation of non-scientific knowledge into scientific language while capturing the whole sense of meaning and nonetheless represents a post/colonial appropriation of knowledge (DeLoach, 2023).

As the idea of pluriversality derived from mostly non-academic contexts in Latin America (e.g. *Zapatista* movement, Andean *campesinos*, Afrocolumbian movements), the practices of people and conceptual discussions of scholars often refer to concrete socio-environmental conflicts and claims for environmental justice. By including the Latin-American points of view of other worlds, it not only includes the distribution of goods but *"el buen vivir"* ("live well"), the right to live well (Huanacuni, 2010; Leff, 2017). Within this context, it is essential to highlight the critical relationship between land, freedom and justice in local communities that depend on land in different ways Justice is therefore interrelated with the land, and multiple actors within these are heavily interconnected ,and reached from a bottom-up perspective (Moutinho et al., 2016).

6.3 Methodology

6.3.1 Definitions

For this analysis, the following definitions are contemplated:

(1) The Brazilian Amazon region is geographically located in the 'Legal Amazon Region'. It is politically distributed into the states of Acre, Pará, Amazonas, Roraima, Rondônia, Amapá and Mato Grosso as well as the regions located north of parallel 13º S, in the states of Tocantins and Goiás, and west of the 44º W meridian, in the state of Maranhão as status in the article 3rd of the 12.651 National Law (see Map 2) (LEI Nº 12.651, 2012).

(2) We follow the Land definition MEDINA-SANSÓN et al. (2014).: "*Land can be recognised as the terrestrial ecosystems or the portion thereof, recognised by individuals and communities, under very diverse cultural and socio-economic circumstances; furthermore, as the physical environment or substrate for the development of any form of life. Thus, social conceptual constructions of land with ontological scope, ecosystemic implications, religious-magical implications, or both*" (p. 56).

(3) Therefore, we defined the Amazon forest as the vast biodiversity within 71 million hectares of Amazonian Land, and circa 25 million inhabitants, its tradition, culture, cosmovision, and the socio-environmental and political dynamics (Eichman Jakob, 2014; I. C. Vieira et al., 2008).

(4) We identify the concept of justice as a flexible, pluralistic term for many different realities. As SCHLOSBERG (2007a) describes, justice must be understood in different forms and terms and in different times, places and contexts, addressing the discourses of distribution, recognition, capabilities and/or participation. It is critical not to ignore various perspectives or conceptions of justice, nor to impose a single solution, but rather to develop a specific concept for each situation by combining diverse ideas into a broad, inclusive, and practical understanding of socio-environmental and ecological justice (p.167).

Map 2 Brazilian Legal Amazon

6.3.2   The systematic search

To analyse the scientific knowledge production on the social and environmental dynamics of land-use in the Brazilian Amazon region and their interaction with social and environmental (in)justice, a systematic literature review was conducted using the Western dominant scientific dissemination database Web of Science (WoS) and Scopus and the Latin-American database Scielo. Search engines are used to distribute scientific knowledge and search for literature efficiently. WoS and Scielo are the most frequently used databases in different scientific fields (E. Vieira & Gomes, 2009) by European and Western universities (Chadegani et al., 2013). The systematic literature review covered the period from January 1970 to February 2022. Table 4 shows the query string applied to select the scientific articles. The query words were selected based on our objective, the definitions established for this article (see Chapter 6.4.1), and the search specifications required by each search engine.

The systematic search was carried out as follows;

(1) We used the following words and their translations to Portuguese for the search query;
   a. Amazon* and Brazil, to define the geographical region of the analysis; and
   b. Just* or/and Injust*; to identify the relevant articles working with the (in)justice concept.

(2) We follow the specifications according to the search engines;
   a. When using the asterisk after a word (*), we increase the spectrum of the search with that word (e.g. Amazon* can be interpreted as Amazonia, Amazon, etc.).
   b. We used the conjunction AND to use two or more terms in the same search query (e.g. (Amazon*) AND (Brazil*))
   c. We used the conjunction OR to use one or the other terms in the same search query (e.g. (Just* OR Injust*)

(3) We conducted the research using different scientific collections offered by the search engines (see Table 4);
   a. The first search was conducted with WOS All Databases, using the "Topic" option for all the words in the search query.
   b. The second search was conducted in Scopus, using the "Article Title, Abstract, Keywords" option.
   c. The third search was conducted in Scielo, using the "All indexes" option.

Table 4 Search terms to identify relevant articles for (in)justice in the Brazilian Amazonia region*

String query	Database	Language	Articles retrieved	Articles selected
EN: (Amazon*) AND (Brazil*) AND (Just* OR Injust*)	Web of Sciences	EN	640	25
		PT	111	5
PT: (Amaz*) AND (Brasil*) AND (Just* OR Injust*)	Scopus	EN	355	20
		PT	37	2
	Scielo	EN	123	6
		PT	123	3
	Total		1389 retrieved, 893 non-repeated titles	61 selected, 36 non-repeated titles

*See Chapter 6.3.2 (2). EN: English PT: Portuguese.

6.4 Study area: Amazonia as an arena of struggles for socio-environmental justice

Water and forest, Critical Soundscapes project (2024)
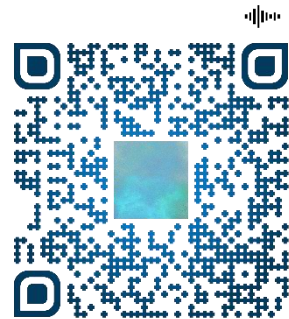
Link Here

The Amazon region has been a field of conflict over natural resources since pre-colonial times. Indigenous communities transformed the Amazonian forest into an anthropogenic landscape through dynamic settlement, productive and extractive activities and exchange, alliances and solidarity, as well as inequalities, power relations and conflicts between and within these indigenous communities (Denevan, 2005; Hastik et al., 2013; Lehmann et al., 2003; Neuburger, 2008; Plenderleith, 2011). Since the colonisation by the Portuguese, settlements changed, and the colonisers even changed the dynamics of indigenous communities. Moreover, since Brazilian independence from colonial rule, the Amazon forest has been treated politically in the name of 'national interest' as an inexhaustible source of resources (Teixeira & Fonseca, 1998). Pressure on natural resources increased considerably during the golden age of mega-projects (1950s to 1970s) when the Brazilian Amazon agenda was based on economic growth through large-scale infrastructure projects (Nelson, 2004). In these decades, the development agenda was dominated by projects such as highways, dams and power plants (Nelson, 2004). Therefore, policies regarding investment in transport, electric energy infrastructure, and tax and credit incentives were introduced (IPAM, 2006; Loureiro & Pinto, 2005). Furthermore, Brazil and the Amazon forest have never seen a successful agrarian reform, leaving farmland under the quasi-colonial structure of landowners with considerable control over land-use (Ondetti, 2008; Valente & Berry, 2015). These historical and political

conditions place Brazil and the Amazon region among the places with the most unequal land system in the world (Albuquerque Junior et al., 2019). Simultaneously, the military government (1964-1985) repressed all kinds of social mobilisations, including the ones seeking justice (Domask, 1998). After the very violent decades of the 1970s and 1980s and – subsequently, the democratisation process – a slightly more peaceful phase emerged in the 1990s. Land conflicts have continued to increase due to growing pressure on the area by expanding the agrarian and extractive frontiers and responding to activities of landless movements like *Movimento dos Trabalhadores Sem Terra* (MST). Thus, conflicts to this day are not limited to territorial disputes over resource rights and access conditions. They also include struggles related to the ecological impacts of resource extraction and cultural ones caused by 'coloniser's models' on local people as well as contradictions between various forms of appropriation and the transformation of nature (Leff, 2017). Throughout history, these created power dynamics that led to the marginalisation of local groups and communities, for instance, groups such as indigenous and traditional communities and Afro-Brazilian *'quilombolas'*, among others (Da Silva & Bampi, 2019). These groups face profound systematic and structural injustices as they struggle with ecological impacts, land dispossession and natural resource exploitation (Coy & Neuburger, 2009). Despite possessing a rich cultural heritage and valuable regional knowledge, these communities often find themselves voiceless and marginalised in decision-making processes (Hendlin, 2019; Hess et al., 2016; Jacarandá & Matzembacher, 2018).

The modernisation of the Amazon region continues to carry with it intrinsic injustices (In Chapter 6.1, we deepen into the concept of justice), verified by the proliferation of land disputes affecting all kinds of actors (Da Silva & Bampi, 2019). These development cycles have interfered with social structures, altering and unravelling populations, devastating cultures and engendering conflicts (Fernandes, 2004). However, these cycles and socio-environmental conflicts have turned international attention to the Amazon – for instance, the Rubber Tappers Council (CNS) and Chico Mendez's fight against agrarian frontier expansion and subsequent deforestation. In the last decades, as a reaction to political pressure from international and national environmental NGOs and in the quest to avoid these socio-environmental conflicts, the Brazilian government implemented some policies with significant impact on the environmental and social justice movement - such as the National Policy for the Sustainable Development of

Traditional Peoples and Communities (Decree 6.040), implemented in 2007, or the New Forest Code (Law 12.651) of 2012. However, despite these policies that offer protection against social and environmental insecurities and uncertainties as well as the triggering of land conflicts, the occupation of the Amazon and dynamics of injustice keep taking place.

Through the period of socio-environmental conflicts, development and sustainability discourses, Amazonia became a point of interest in climate change discussions (Ciappelloni, 2019; Neuburger, 2008; Ometto et al., 2014). Therefore, the number of scientific articles has increased correspondingly. These articles deal with land-use changes like deforestation, agricultural expansion, hydropower stations, and mining activities (Salazar et al., 2015; Tucker Lima et al., 2017). When it comes to solutions to the identified issues, sustainability, nature conservation, and protection of indigenous territories are dominant ideas for the future of Amazonia (ASLP, 2020; Herrera et al., 2019; C. S. Simmons, 2004; Soares-Filho, 2018). Yet, despite this boom in the scientific literature on the Amazon, it remains unclear how the myriad and diverse ways of knowing and thinking about the dynamics of land use in the Amazon and possible pathways to a more just and livable future are considered in scientific debates (Tlostanova, 2009).

6.4.1   Exclusion and inclusion parameters

In the second step, the titles and abstracts of the retrieved articles were screened for the first time to identify relevant articles which refer to the query string applied. We follow the next rules to retrieve, double-check or exclude the articles for analysis:

The articles were classified as "NO" ((this means excluded) for not meeting the specific parameters (n=830)); The document exclusion parameters were:

> a.   when reading the title, keywords, abstract, and body, the article was not related to the topic.
> b.   the articles were not peer-reviewed literature.
> c.   the articles were missing words or a word from the query string.
> d.   the word Just* was selected in the query as a relevant word when referring as an adjective (e.g. "to be just") and as an exclusion parameter when referring to an adverb (e.g. "that is just what I
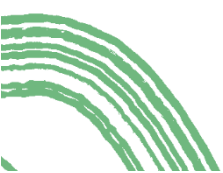
need"). This last parameter excluded a high percentage of articles (~85 per cent).

(2) The articles were selected as "YES" (this means to be analysed);

    a. when the article was directly related to the string query, and in addition to land or forest use, tenure, and/or management topic when reading the title, keywords, abstract, and body (n=14).

(3) Some articles were identified as "PERHAPS" (this means to be double screened) (n=56). These articles were not conclusive in our first screening. Therefore, they were screened a second time. At this time, the body of the article was read:

    a. the articles were classified as "NO" when the article body was not related to the topic when reading the title, keywords, abstract, and body (n=34).

    b. the articles were selected as "YES" when the article was directly related to the query string and topic when reading the title, keywords, abstract, and body (n=22).

After the first and second screening, 36 peer-reviewed articles were selected (see supplementary material). The next chapter presents how the articles were codified and classified.

6.4.2   The codification

Finally, a coding plan was developed in MaxQDA (VERBI Program 2022) to classify the selected articles. First of all, we explored the visibility of knowledge production on Amazonian issues:

(1) We analysed the structural inequalities in the scientific knowledge production

    a. by codifying the languages used in the articles themselves and references type used per article as indicators for recognition of Brazilian or Latin American knowledge production when writing about Brazilian Amazonia, and

    b. by analysing authorships and author teams and the location of their institutional affiliation as indicators for integration of local or national knowledge production.

In the second step, we characterise the issue of the article and describe problems and solutions identified by the authors of each article:

(2) We analyse the framing of conflicts and dynamics in the Brazilian Amazon by answering the following questions:
   a. What is the main issue of the article?
   b. What is defined as problem, and which reasons are identified?
   c. What are the solutions – if so – considered?

The subsequent coding plan was developed to characterise the visibility of pluriverse approaches in the articles and within the scientific community. For this, we

(3) analyse explicit and implicit integration of dimensions of pluriversal concepts
   a. by identifying geographical areas and the spatial level (local, regional, national) referred to in the articles as indicators for homogenisation of local-regional diversity and/or consideration of heterogeneity,
   b. by identifying methodological approaches as indicator for potential silencing or hearing subaltern voices, and
   c. by analysing stakeholders and their role (active-passive, homogenous-heterogenous etc.) in the described socio-environmental dynamics as indicators for consideration of active roles of local and indigenous actors.

In the following chapter, we will present the results of every step of the coding for, eventually, discussing the visibility of pluriverse approaches and identifying research gaps in the way of decolonising international scientific discourses on Amazonia.

6.5   Results

6.5.1   Amazonian socio-ecological justice as a topic of international scientific knowledge production: Whose scientific voices are heard?

The results section commences by demonstrating the growth of scientific articles associated with (in)justice issues in the Brazilian Amazon from the 1970s to 2022. The visualisation in Figure 9 shows a substantial rise in articles, particularly from the 2000s onwards. This dynamic may link to political circumstances in Latin American countries with Amazonian areas: In the late 1980s, the democratisation process in several Latin American countries provided more access to the Amazon region for international researchers and development agencies. Furthermore, settlement and deforestation dynamics attracted international attention, so scientific knowledge production increased by the 1990s. In the 2000s, global discourses on climate change and the importance of tropical rainforests for climate mitigation significantly broadened research funding opportunities and, consequently, generated scientific output.

Figure 9 Number of articles per year and topic in Scielo, Scopus and WOS search engines*
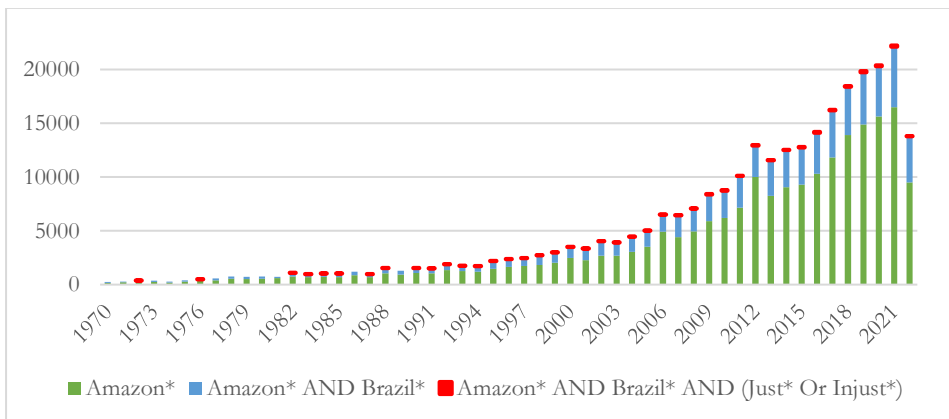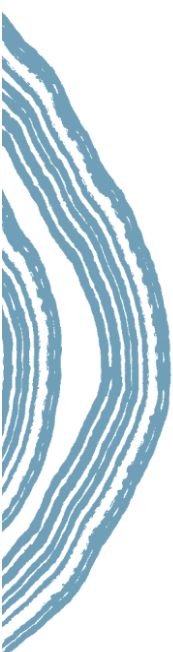
* Displays of the search query were conducted in Scielo, Scopus, and WOS search engines, only in the English language, in February 2022. A total of 204,696 articles were retrieved with the word Amazon*, 77,073 with Amazon* AND Brazil*, and 1,118 with Amazon* AND Brazil* AND (Just* OR Injust*).

In total, the search query in English and Portuguese retrieved a total of 1389 articles. Of those, 496 were found published in more than one search engine. Therefore, 893 articles were screened, and after being analysed, 36 peer-reviewed articles were used in the analysis (see methodology). The selected articles that meet all our inclusion criteria were published between 1995 and 2022.

Of the 36 articles, 25 articles were found in WoS, 20 in Scopus, and six in Scielo. Eleven articles were found in both Scopus and WoS, and four in Scielo and WoS. None were found published in Scopus and Scielo at the same time. Of the 36 articles, 29 were initially published in English, six in Portuguese and one in French. None of them was published in Spanish, which is not surprising due to our focus on Brazilian Amazonia - but it showcases the historically low rate of research cooperation between Latin American countries. The language of the articles is highly linked with the number of citations, showing higher visibility in the international scientific community for English-language articles. These inequalities are reinforced by looking at the levels of H-index of the articles' respective journals. Furthermore, we found that Brazilian authors published mainly –six out of twelve main Brazilian authors – in Brazilian journals with a lower H-index (see Table 5). This confirms the observation of Ramírez-Castañeda (2020) that English has become the dominant language of Western science, causing a gap in visibility between research of native speakers and non-natives, and broadening the gap in science knowledge dissemination between non-English speaking stakeholders. However, English-language articles may improve dissemination of Amazonian Land and forest issues at international level. Nevertheless, local actors and social movements seldom have access to these scientific papers due to language skills or social distance. In addition, the scientific fieldwork by Brazilian researchers is currently threatened by financial and political factors (de Area Leão Pereira et al., 2019), widening the gap between science and the people who could benefit from it. widening the gap between science and the people who could benefit from it.

In the second step, we search for the institutional affiliation of the articles' authors (see Table 5). It was found that of all 106 involved researchers, 26 were affiliated with universities and institutions outside Brazil and Latin America, and 52 were affiliated with Brazilian institutions – research or governmental agencies, NGOs, or universities. Researchers affiliated with non-Brazilian and non-Latin American universities and institutes participated in 25 articles (~ 70 per cent), while being

main authors of 23 articles. Despite the emerging interest in the struggles of poorer communities for environmental justice (see below analysis of papers' content), it seems that local voices are silenced, at least by authorship, because the bulk of the literature tends to concentrate on authors of the Global North (USA, Norway, United Kingdom). Affiliated main authors from the USA, and European countries (EU) execute strong influence on research on Amazonian issues and prefer to associate with institutions of the Global North for collaboration and writing. There, access to resources and research facilities, the degree of social relationships with highly ranked researchers, and the influence over others' activities play a role in scientific community involvement. This leads to self-reinforcing hierarchies and status within science, similar to other social structures (Nielsen & Andersen, 2021), affecting the production and reproduction of powerful discourses that may create inequity. For instance, according to Newell (2007), the global visibility of the debates surrounding the definition of environmental justice in the United States has significantly impacted activists and scholars from Brazil and Latin America.

Majee and Ress (2020) found that regardless of all forms of colonial resistance in Brazil's extensive public and private universities, Euro-American models often undermine educational models. USA-affiliated authors are listed as the main authors in nine articles, while fourteen are led by European authors and one more is led by an Australian author. Despite the high number of authors from the Global North, Brazilian authors are listed in twelve articles as primary authors, which could indicate the importance of local voices in scientific discourses. However, focussing with more detail on the involvement of Brazilian researchers, we found that the majority of them (n=7) are affiliated with entities localised in metropolis outside the Amazonian region (São Paulo, Rio de Janeiro, Brasília, among others). The Amazonian Universities involved in authorship are the Federal Universities of Pará (Belém) and Rondônia (Porto Velho) and research institutions in Acre, Amazonas, Mato Grosso and Tocantins. The dominance of institutions in central metropolitan areas in Brazil already indicates inequalities within scientific structures in Brazil. In addition, hierarchies between academia and non-academics can be exhibited by the non-inclusion of authors of Amazonian movements or social movements in general, like MST, Associations of small-holders, movements of rubber tappers, quilombolas or communities affected by dams. This information already disinvolves some insights into the production of science and its intrinsic relation to scientific subaltern voices. This

leads to the conclusion that Brazilian-affiliated scientists reproduce Western scientific hierarchies in knowledge production. Nonetheless, as mentioned in Chapter 6.2, there is a large scene of researchers working on post- and decolonial perspectives (often in the context of action research). However, many Brazilian post- and decolonial scholars – for instance, Alfredo Wagner Berno de Almeida, Sheila Borges Dourado, and Carolina Bertolini (Nova Cartografia Social da Amazonia), among others – do not have or do not want to publish in high-ranking journals but prefer to publish in local/regional scientific journals or even produce non-scientific papers to make results accessible for the movements they participate in. To further assess how local perspectives were incorporated into the articles' analysis, additional research would be needed to determine the degree of involvement of researchers, local actors and regional actors in both the fieldwork and writing process.

Table 5 Articles' bibliometrics

Author	Journal	Times Cited	Journal H-Index	Amount of sources	News	Official documents	Private companies	Scientific sources	Europe	USA	Other countries
					Brazilian				Non-Brazilian		
Cummings, 1995	Geo Journal	26	72	33	12,1	6,1	15,2	27,3	12,1	27,3	0,0
Hendlin, 2019	Local Environment	9	67	75	1,3	1,3	0,0	20,0	20,0	48,0	9,3
Mayer et al., 2021	Energy Research and Social Science	76	16	88	0,0	0,0	0,0	11,4	30,7	43,2	14,8
Randell & Klein, 2021	Society and Natural Resources	3	91	52	0,0	1,9	7,7	26,9	15,4	38,5	9,6
Salm et al., 2021	Contemporary Justice Review	1	16	21	0,0	0,0	0,0	4,8	33,3	52,4	9,5
Simmons et al., 2010	World Development	86	192	87	0,0	13,8	0,0	33,3	5,7	43,7	3,4
Simmons, 2004	Annals of the Association of Geographers	121	156	172	2,9	5,8	0,0	24,4	12,2	52,3	2,3
Valente & Berry, 2015	Geographical Review	10	47	85	1,2	8,2	0,0	48,2	4,7	35,3	2,4
Zanotti, 2015	Politics, Groups and Identities	29	n.a.	42	0,0	0,0	0,0	11,9	11,9	64,3	11,9
Agostsson et al., 2014	The International Forestry Review	10	52	34	0,0	5,9	0,0	23,5	47,1	17,6	5,9
Alves-Pinto et al., 2018	Ecological Economics	18	220	82	4,5	12,2	0,0	29,3	28,0	22,0	8,5
Atkins, 2020	Political Geography	12	120	111	0,0	7,2	9,9	21,6	29,7	18,9	8,1
Cammelli & Angelsen, 2019	Ecological Economics	26	220	91	0,0	0,0	0,0	33,0	31,9	28,6	6,6
Carmenta et al., 2021	World Development	5	192	126	0,8	2,4	0,0	7,9	42,1	24,6	22,2
Couto Pereira, 2010	The Journal of Environment & Development	84	45	58	1,7	1,7	0,0	13,8	32,8	32,8	17,2
Fraser, 2018	Transactions of the Institute of British Geographers	24	114	54	0,0	1,9	0,0	13,0	38,9	42,6	3,7
Garrett et al., 2021	Annual Revies of Environment and Resources	124	27	153	1,3	5,9	3,3	35,3	22,9	27,5	3,9
Gauché, 2011	Annales de géographie	0	17	56	0,0	0,0	0,0	37,5	48,2	3,6	10,7
Hess et al., 2016	Desenvolvimento e Meio Ambiente	18	5	22	0,0	9,1	13,6	31,8	31,8	13,6	0,0
Ioris, 2018	Geographical Review	15	44	53	3,8	0,0	0,0	32,1	35,8	13,2	15,1
Kleinschmit et al., 2021	Frontiers in Forests and Global Change	4	18	78	2,6	5,1	3,8	29,5	25,6	21,8	11,5
Normann, 2022	Journal of Social Issues	4	130	91	1,1	0,0	0,0	4,4	52,7	26,4	15,4
Weißkermel & Azevedo Chaves, 2020	De Erde	8	25	54	0,0	7,4	7,4	42,6	13,0	18,5	11,1
Bargas & Cardoso, 2015	Boletim do museu paraense Emílio Goeldi ciências humanas	26	5	49	0,0	4,1	0,0	69,4	22,4	4,1	0,0
Castro et al, 2017	Sustentabilidade em Debate	0	4	23	0,0	4,3	0,0	82,6	4,3	8,7	0,0
Jacarandá & Matzembacher, 2018	Revista, direito e práxis	2	4	60	1,7	18,3	0,0	56,7	6,7	16,7	0,0
Litre et al., 2020	Agraciência Uruguay	1	n.a.	52	0,0	1,9	0,0	32,7	17,3	30,8	17,3
Moutinho et al., 2016	Elementa: Science of the Anthropocene	110	40	91	0,0	17,6	0,0	50,5	8,8	20,9	2,2
Porro & Porro, 2022	Land Use Policy	110	40	134	1,5	13,4	0,0	38,1	19,4	20,9	6,7
Procópio, 2009	Revista Brasileira de Política Internacional	0	125	21	0,0	0,0	0,0	42,9	38,1	14,3	4,8
Schmidt et al., 2019	Plant Biology	2	18	60	0,0	8,3	0,0	58,3	13,3	11,7	8,3
Sieben & Cleps Junior, 2012	Sociedade & Natureza	80	92	35	5,7	28,6	0,0	62,9	0,0	2,9	0,0
Da Silva & Bampi, 2019	Cuadernos de Geografía	14	8	32	0,0	31,3	0,0	46,9	18,8	0,0	3,1
Spinola et al., 2020	Journal of Applied Ecology	12	4	27	0,0	3,7	0,0	44,4	33,3	14,8	3,7
Villas-Bôas et al., 2018	Desenvolvimento e Meio Ambiente	9	192	36	0,0	19,4	0,0	63,9	5,6	11,1	0,0
Urzedo & Chatterjee, 2021	Journal of Genocide Research	18	29	116	0,9	6,0	3,4	27,6	21,6	27,6	12,9

Legend:

* English | Portuguesse | French | Main author USA institutional affiliation | Co-author USA institutional affiliation | Main author Brazilian Amazonia region institutional affiliation | Main author EU country institutional affiliation | Co-author EU country institutional affiliation | Co-author Brazilian Amazonia region institutional affiliation | Main author with metropolitan Brazilian institutional affiliation | Co-author Brazilian Amazonia region institutional affiliation | Main author Brazilian institutional affiliation (São Paulo, Rio de Janeiro, Brasília, etc.) | Co-author central Brazilian institutional affiliation | Main author other north-wester country institutioanl affiliation | Co-author other north-wester country institutional affiliation | Source's percentage | Predominant percentage of sources

In the third step, we explore the visualisation and silencing of local and regional perspectives in the articles through their use of references (see Table 5). The authors mostly cited peer-reviewed articles, then books, followed by governmental and NGOs sources, news from Brazilian newspapers and articles developed by private companies. All authors included Brazilian voices or sources in the argument of their articles. Nevertheless, the representation of Brazilian voices in each article is quite different. In most cases, non-Brazilian authors quoted other non-Brazilian authors much more frequently than Brazilians for their assessments. In contrast, Brazilians cited more Brazilian sources. Mixed author teams were found to tend to cite more authors related to the institutional affiliation of the main author. A pattern was found in which authors from the USA cited more authors from the USA, while EU and Brazilian authors cited more authors from their respective institutional affiliation nationality.

In addition, our analysis indicates that perspectives of Brazilian scientific authors and Amazonian local and regional actors are less visible in international scientific discourses when considering Amazonian Land and forest issues linked with socio-ecological justice concerns. Article and journal language are highly linked to citation indices, marginalising authors of Brazilian institutions and Amazonian entities. The knowledge gap, communication, and exchange are reinforced by scientific circles that are constituted by (self)referencing the scientific results of their 'own' community. However, mixed author teams indicate the Global North's researchers' effort to integrate Brazilian voices into their studies. To give some insights into how this integration worked and how pluriverse thinking is considered, we will go deeper into the content analysis in the following chapters.

6.5.2 Discourses on land and forest issues in the Amazon context: What topics, reasons, and solutions?

Several focuses were identified within the studies. A common focus lies on the Amazon region as a whole but more specifically on the state of Pará. Articles about forest issues – mostly integrated into studies on climate change adaptation and mitigation as well as on forest fires – concentrate on the states of Amazonas and Pará or on the whole Amazon region. Papers on land issues have a broader perspective on several other states. Dam construction articles are related to land (re)distribution issues and are mainly based on the state of Pará. Many of these

articles cite sources from private hydroelectric companies. These observations indicate not only the omnipresent relevance of land issues in the Amazon region but also the preference of international researchers who often cooperate with research institutions in the respective states. The high number of studies about Pará is a result of the high concentration of national and international NGOs, private investments, research institutions and universities, a high number of researchers present in the state capital Belém and consequently of broad funding opportunities. Resulting in a high output level of scientific knowledge production (see Figure 9).

Nineteen articles, eight led by Brazilian authors, study land conflicts and rights issues. Land tenure and land rights are the main topics discussed by the authors. The most common problems expressed by the authors were land conflicts in different contexts: conflicts around extractive reserves and indigenous protection areas, agrarian frontier dynamics, land reform issues involving landless people and their movements, human rights and legal and formal and informal property rights on land. The topics are not new, as these dynamics have been known since the 1970s. However, approaching these dynamics with a socio-ecological justice lens reveals new identity, recognition, and agency aspects. We found the consideration of these new perspectives in seven articles, some of them written by Brazilian authors. Furthermore, dam construction-related issues were the basis of seven articles. Though, only one article was led by a Brazilian-affiliated author. To identify global discourse connections to the local level we analysed – as Dryzek (2005) suggests – he 'global' programs of nature conservation and development in the Amazon region as a reflection of the interests of developed countries. In the 36 articles of our analysis, we found that nineteen articles used the global term 'climate change', which was primarily used in papers related to conservation and environmental impacts and authored by persons affiliated with European institutions. In seven articles, climate change was directly related to economic mitigation strategies for deforestation as payment for ecosystem services, and one more with fire mitigation strategies. The rest were related to land dispute issues, sustainable development goals and energy policies. Of these 36 articles, eleven were assessments with a focus on the local level. While climate change is a relevant topic worldwide, it was less invoked by Brazilian authors, possibly due to their sensitivity to the relevance of conflicts and dynamics in the Amazon region not directly linked to climate change.

This observation applies even more to the issues on forests, which include seven articles by our coding. Five of seven articles assessed the topic of adaptation and mitigation strategies. Four articles discuss and analyse policies following concepts as payment for ecosystem services (PES). The remaining article discusses community-based solutions to restore forests, as the main problem identified by the authors was climate change and deforestation. The internationally most considered solution for deforestation dynamics is linked to PES, which is seen as an adequate way to eliminate poverty and foster social injustice. This goes hand in hand with the analysis of adaptation strategies by studying functionality, problems and success of the REDD+ program and other governmental policies. PES and REDD+ are concepts created by international development agencies and within discourses of the Global North and are criticised by activist movements due to the implicit or explicit commodification of nature. The majority of articles that see these concepts as a solution for deforestation and poverty are – consequently – mainly authored by non-Brazilians.

In addition, theoretical movements have positioned the concept of justice at the centre of a new pluralist statecraft (Escobar, 2004; W. Mignolo, 2009, 2011). The movements are founded on an inequity critique in the allocation of socio-environmental issues and emphasise the importance of recognition and engagement in a holistic understanding of justice (Schlosberg, 2007b). Hence, a search for the terms pluriverse and justice was conducted in the 36 articles. The review found that Procópio (2009), Fraser (2018), and Hendlin (2019), used the term pluriverse. These articles were found to be theoretical and not on applied issues. Cummings (1995), Bargas & Cardoso (2015), Hess et al. (2016), Castro et al. (2017), Ioris (2018), Jacarandá & Matzembacher (2018), Villas-Bôas et al. (2018), Schmidt et al. (2019), Atkins (2020), Weißermel & Azevedo Chaves (2020), Carmenta et al. (2021), Randell & Klein (2021), Salm et al. (2021), Normann (2022), and Porro & Porro (2022), described a pluriversal approach without mentioning the terminology. Even though pluriversal thinking mostly comes from theorists based in the USA, pluriversal approaches were found more frequently in Brazilian and EU-affiliated articles. Subsequently, the justice concept search found that social justice is the most frequent search term and is present in all of the articles. Also, other types of justice were mentioned: distributive, procedural, rural, and spatial. Of the 36 articles, only the non-Brazilian authors Fraser (2018) and Hendlin (2019) included a justice definition. However, this analysis found that none of the articles used or developed a heterogenic definition

of justice or included concepts and imaginations of justice of stakeholders. Yet, taking local perspectives seriously and acknowledging them as relevant to global issues is a cornerstone pluriversal thinking.

6.5.3 Spaces seen and stakeholders heard: Using a pluriversal lens to observe socio-environmental processes in the Amazon region

Geographical scales, methods used and data produced

Research in the Amazon is growing year by year (see Figure 9). Some places and situations are more often studied than others due to various factors. Therefore, we identified the geographical scale and distribution of the articles to present a geographical overview of the research conducted. Regarding geographical distribution, the articles were primarily coded by geographical area. Five of the nine states belonging to the Legal Amazon were individually mentioned in the articles. The state of Pará was the most assessed and subject of twenty-four articles. The states of Acré, Amapá, Maranhão and Goias did not enter into an individual assessment. Furthermore, when the articles assessed all nine states collectively, they were classified as assessments of the Legal Amazon. Thus, eight of these assessments were conducted for the Legal Amazon (see Figure 10). We have previously explained some reasons why Pará might be the state with the most conducted research (see Chapter 6.5.2). Nevertheless, it is essential to recognise that the lack of assessment in other Amazonian states may present a blurry reality of the region. To point out this last statement, a search in WOS was conducted using the CC 'All Fields' selection from January 1970 to February 2022. The search query used was: Amazon* AND Brazil AND the name of each nine states part of the legal Amazon. The results show a clear hierarchy in numbers: The state of Pará had 11.872 articles, Mato Grosso 3.090 articles, Rondônia 2.067 articles, Acre 1,507 articles, Amapá 1.435 articles, Maranhão 1.181 articles, Roraima 1.032 articles, Amazonas 965 articles, and Tocantins 876 articles. This result clarifies that the states of Pará and Mato Grosso receive the closest attention in internationally considered scientific production. Remarkably, we could not find any correlation between the article's geographical scale and regional focus with authorship or a pluriversal approach. This may indicate that some Amazonian states are being used to represent the whole Amazonia region in scientific knowledge production.

We observe that from the 36 articles, nineteen used primary data. The remaining seventeen articles used secondary data. The type of secondary data most frequently used by the authors was demographic data (n=24), socio-economic data (n=12), and data from surveys (n=6). The demographic and socio-economic data was mainly extracted from Brazilian Institutional and Governmental sources, and survey data from institutional and governmental sources or primary data. Also, when quantitative and qualitative methods were used, the authors often used more diverse data types. Furthermore, twenty-five articles were based on qualitative analysis, whereas the other eight chose qualitative and quantitative approaches. The methods most frequently used by the authors were literature examination, description, and statistical analysis. When the previously mentioned methods were used, these were combined with secondary data in the articles (n=11). Whereas when the data was primary, the methods used were participatory approaches and/or surveys at local and regional levels. All assessments conducted at national level used data compilation, description, and statistical analysis methods.

Using exclusively secondary data means that the authors do not necessarily personally know the region or any stakeholder. Consequently, understanding regional dynamics and local people's rationales may be limited. The same may apply to quantitative data analysis when conducting exclusively statistical correlations without process understanding. With this in mind, the papers of Sieben & Cleps Junior (2012), and Castro et al. (2017), would have the best chance to give insights into pluriverse perspectives. The articles by Simmons et al. (2010), and Cammelli & Angelsen (2019) are, considering the methodological approach and heterogeneity in data acquisition, the most likely to give a complete picture. However, to assess the authors' personal knowledge and the sensitivity to heterogeneity in the region and the stakeholders' rationales, it would be necessary to analyse the scientific biographies of each person. Nevertheless, we observe that most of the main authors with EU institutional affiliation tend to use participatory approaches, selecting primary data, while there were fewer participatory approaches by affiliated Brazilian authors. Six out of nine USA main authors used secondary data. Possible reasons for these national differences may lie in different dominant methodological discourses in European, Brazilian and US-American scientific communities, funding opportunities available for travelling to the regions of interest, or even language issues relevant to empirical social research.

Pluriversal perspectives here seem to not be relevant when it comes to choosing methodological approaches.

Figure 10 Articles' scope, data and methods used*

	USA AMA (N=9)	Europe AMA (N=14)	Brazil AMA (N=12)	Legend
Region	2, 1, 1, 7	3, 3, 1, 8	3, 1, 2, 9	■ Tocantins ■ Amazonas ■ Rondônia ■ Mato Grosso ■ Pará ■ Legal Amazon
Geographical scale	22.2%, 22.2%, 55.6%	21.4%, 7.1%, 71.4%	25.0%, 16.7%, 58.3%	■ National ■ Regional ■ Local
Data source	33.3%, 100%	64.3%, 100%	58.3%, 100%	■ Primary ■ Secundary
Type of analysis	22.2%, 66.7%, 11.1%	14.3%, 50.0%, 35.7%	75%, 25.0%	■ Quantitative ■ Qualitative ■ Mix
Situation refered	Brazil: 8.3%, 16.7%, 66.7%, 50%, 8.3% EU: 14.3%, 35.7%, 28.6%, 21.4%, 64.3%, 28.6% USA: 66.7%, 33.3%, 66.7%			■ Fire ■ Forest conflicts ■ Land conflicts ■ Hydroelectrics ■ Referrals to climate change ■ PES/REDD+

* AMA stands for Affiliated Main Author. Articles can fall into more than one category. Therefore, some percentages might add more than 100%. The figure does not present the information of the Australian institutional affiliation authors Urzedo & Chatterjee (2021), as it was the only article without Brazilian, USA and EU affiliation.

6.5.3.1   Hearing and seeing stakeholders

Following within our study, the pluriverse as an ontological starting point involves highlighting diversity and comprehending that reality is made up of many kinds of worlds (Querejazu, 2016), with many realities and involving many people. Each reality is separate from the other but connected in the Amazon forest. Consequently, in an interconnected world, a way to assume the pluriverse is by

recognising each of its constituent parts (Querejazu, 2016), such as the people and their individualities. According to the Brazilian Institute of Geography and Statistics (IBGE, 2010), around 23 million persons inhabit the Legal Amazon. Among these, traditional communities, indigenous, migrants, farmers, miners, and landowners are sharing, coexisting, competing and living; and are recognised as stakeholders by the authors. Thus, we use the number of stakeholders mentioned in the article as an indicator for considering heterogeneity. In total, we identified 36 groups of stakeholders mentioned by the authors. The authors who identified the highest number of stakeholders in their articles were Simmons (2004) (n = 14), Castro et al. (2017)(n = 12), Procópio (2009) (n = 12), and Sieben & Cleps Junior (2012)(n = 10).

Following pluriversal perspectives, studies should let marginalised and subaltern people speak for themselves, showing their agency (Ehrnström-Fuentes, 2016). That means studies based on pluriversal ideas should avoid a discursive production of marginalised groups as victims of or as passive and lethargic actors in exclusion dynamics and unequal power relations and/or as mere recipients of help and support provided by other (more powerful) actors (Hendlin, 2019; Procópio, 2009).

Analysing the articles in this way, we found out that the most frequently mentioned stakeholder was the Brazilian Federal Government, named in twenty-eight articles. While twenty-six governmental institutions were described as active actors, only eight articles specified institutional settings avoiding homogenisation of the government by referring to individual Ministries such as Agriculture, Development, Education, Environment and Justice and describing environmental and developmental programs (Alves-Pinto et al., 2018; Ioris, 2018; Jacarandá & Matzembacher, 2018; Procópio, 2009; I. B. Schmidt et al., 2019; Sieben & Cleps Junior, 2012; Valente & Berry, 2015; Villas-Bôas et al., 2018). Looking at the role of the government, most articles describe it as one of the most relevant actors with power and agency and having means to control the described processes. Interestingly, many articles with implicit or explicit pluriversal approaches, and all with Brazilian first authorship, consider governmental institutions as actors with negative impacts on local/regional/national processes towards sustainability, justice and environmental or climate protection (Castro et al., 2017; Jacarandá & Matzembacher, 2018; Procópio, 2009; Sieben & Cleps Junior, 2012; Villas-Bôas et al., 2018).

When we focused our analysis on the marginalised groups, we found that indigenous group(s) were mentioned with the highest frequency in fifteen articles. In five articles, the heterogeneity of indigenous people was recognised by naming specific indigenous communities (*Marawatsede, Macuxi,* etc.) or individual members of these communities (Agustsson et al., 2014; J. A. Fraser, 2018; Hendlin, 2019; Procópio, 2009; Villas-Bôas et al., 2018). As another important stakeholder in the Amazon region, traditional/rural communities were mentioned in twelve articles. But in only half of them, their heterogeneity was recognised in the same way as indigenous people (Agustsson et al., 2014; Alves-Pinto et al., 2018; Castro et al., 2017; J. A. Fraser, 2018; Gauché, 2011; Weißermel & Azevedo Chaves, 2020). All articles with pluriversal approaches mention one or both of these marginalised groups. However, eight articles did not mention them. This goes in hand with our observation that indigenous and traditional communities are generally seen as having a positive impact on socio-environmental dynamics, though mainly in a passive role as victims, uninformed and in need of help. However, Procópio (2009) discusses the positive and negative connotations and affirmations towards indigenous groups. Correspondingly, Fraser (2018) debates the power that indigenous groups and traditional communities have gained because of their relationship with the international media and NGOs. Consequently, only these two articles consider heterogeneity and contradictions within subaltern groups.

These different roles ascribed to government and marginalised actors and groups are primarily complementary and interlinked. For instance, as Cammelli & Angelsen (2019) described, indigenous and traditional groups are lacking technical and scientific knowledge towards forest fires and climatic events, the government and big/large landowners, in contrast, are frequently mentioned as the offenders and powerful groups with impairing roles towards sustainability and justice (Cammelli & Angelsen, 2019). Interestingly, in these cases and mostly by articles with pluriversal approaches, governmental actors are homogenised without differentiating between specific institutions, ministries or public agencies. For instance, Fraser (2018) expresses that small farmers and indigenous groups lack rights and recognition and defines them as historically oppressed by the government. Ioris (2018) sees the government as responsible for acts of oppression towards vulnerable groups, facilitating policies for big/large landowners to extend the agribusiness frontier.

Based on our analysis of methodology, spatial scale and stakeholder description used, we could state that the authors' affiliation and pluriversal perspectives are irrelevant when choosing a method and spatial scale. Yet, when going into detail on how authors position stakeholders in the topic or see their role in socio-environmental dynamics, pluriversal thinking authors recognise the most frequently mentioned subaltern groups, indigenous and traditional people, as actors with (positive) agency and valuable knowledge in developing solutions on their own. For instance, Cummings (1995) Hess et al. (2016) Fraser (2018) Hendlin (2019) Schmidt et al. (2019) homogenised governmental actors and tended to romanticise subaltern groups by ascribing a positive role to the latter. Thereby these authors somehow run into the danger of reproducing dichotomies that pluriversal concepts reject.

6.6   Conclusion

This paper analyses the scientific knowledge production on social and environmental dynamics of land-use change in the Brazilian Amazon region and their interaction with socio-environmental (in)justice. We demonstrate how science is obtained, produced, and reproduced in this context by focussing on two Western scientific hegemonic search engine frameworks and one Latin American. Although the (Brazilian) Amazonian region and their land and forest issues have been important topics of the international scientific discourse since the 1970s, perspectives on socio-environmental justice have only been considered since the 2000s, even though local/marginalised actors have been advocating for it for decades. Furthermore, our analysis of 36 selected articles gives insight into citation practices and politics. The affiliation of (first) authors corresponds very much to the literature cited in the papers by (self) referencing the scientific results of the 'own' scientific community. This may be because review processes of international journals often stay within their own scientific community, and authors maintain (self) referencing practices to increase their citation grade and lower the risk of their article being rejected. Even though authorship teams of mixed affiliation increase the diversity of perspectives in scientific knowledge production, citation politics reproduce power relations as English literature is significantly higher ranked in citation and h-index as non-English papers. With this, we understand that there are more scientific knowledge sources, but due to socio-economic,

cultural, epistemic and ontological, among other conditions, these are segregated from the dominant international scientific debates.

Going deeper into methods, topics and stakeholders considered in the analysed articles, we observe that issues and spatial scales do not correlate with author affiliations. Nonetheless, Brazilian authors rarely link land and forest issues to climate change, while US-American and European authors focus on these interrelations using mostly analytical and management concepts of transnational institutions (REDD+, PES, etc.). In contrast, many Brazilian and EU authors integrate implicitly or explicitly pluriversal approaches in their work. Having citation rankings in mind means that the pluriverse concept is significantly less recognised in global scientific discussions. The application of participatory methods, mainly by European authors, may counteract this marginalising effect on pluriverse sensible scientific discourses - even though all US-American authors exclusively use secondary data with low potential to show subaltern perspectives. This goes hand in hand with our analysis of stakeholder description, showing that Brazilian authors have an explicitly critical view of the Brazilian government. Almost all articles – independent of authorship, language and pluriversal approach – mention indigenous and/or traditional communities as relevant social groups in the Amazon region, however, with a tendency to romanticise and victimise their role in socio-ecological dynamics.

To conclude, as shown in our analysis, power relations in the Amazon are not fixed but constantly renegotiated (C. S. Simmons, 2004), then displayed and replicated based on the authors' scientific position (language, affiliation, privilege). In this context, articles ranked higher in the Western scientific world may influence future climate change, justice, political approaches or visions. Nonetheless, life is made of an infinitive number of truths, and not only of the Western scientific one (Orlans, 1971). The portrayal of stakeholders and issues can be viewed from numerous angles, but the reality can only be comprehended if the different narratives are heard and/or replicated. This avoids the monopoly of truths and romanticising (Procópio, 2009), or demonising individuals and their actions.

Generally speaking, when it comes to Western scientific knowledge production, it is necessary to emphasise the relevance of higher education approaches, which are frequently at risk of producing and reproducing instrumental and ethnocentric imaginaries of justice (V. Andreotti et al., 2018; Whyte, 2019). These imaginaries

tend to maintain the unequal distribution of power and justice, denying marginalised communities the opportunities to create and recreate their own visions of development and social transformation (Donald, 2012; Spivak, 2004). In this way, epistemic hierarchies favour Western science and technology in the Global North (Ahenakew, 2016). Eventually, dominant Western scientific knowledge produces "a monoculture of the mind as space for local alternatives disappears, much like an imported plant variety. Monocultures that contribute to the displacement and degradation of local diversity" (Shiva 1995 p.7). and other post-colonial and decolonial authors' proposal for a 'pluri-universal' episteme, in which they recognise the segregated ontologies, without leaving aside the important contribution of Western knowledge production.

7 The role of social and traditional media in the Amazon forest: in search of pluriversal discourses

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Abstract

The Brazilian Amazon has become a focus of international interest because of its relevance to influence climate change, directly related to regional deforestation rates—particularly in Pará, the Brazilian state with the highest deforestation rate in the Legal Amazon. Traditional and social media discourses are transcendental in narrating some Amazonian stories. Simultaneously, different actors construct discourses to illustrate different realities of this region, contributing to the production and reproduction of unilateral or multilateral forms of information and discussion about the Amazon dynamics. These discourses help to structure power relations at a local level and have a strong influence on decision-making. This research presents a critical discourse analysis of traditional and social media related to socio-environmental dynamics in Pará and the Brazilian Amazon forest from a pluriversal perspective. It aims to answer the questions: a) What are the socio-environmental discourses about Pará's Amazon forest in social media and newspapers? b) How are they configured? and c) Which voices are heard and excluded? To achieve this, the national newspaper Folha de São Paulo (FSP or A Folha), the state newspaper O Liberal (OL) and tweets about the Amazon forest and Pará were selected. The search was conducted from October 1st, 2020, to September 30th, 2021. It shows that social media X mainly replicated hegemonic media discourses, like FSP and OL, and did not represent various pluriversal voices.

Keywords

Amazonia, agriculture, deforestation, discourse analysis, traditional media, Twitter

7.1   Introduction

The Brazilian Amazon rainforest, a crucial centre of global biodiversity and a key player in climate regulation is "now on the edge of ecological collapse" (Rahimi, 2024), "deforestation is destroying the biodiversity", and "fires and agriculture are contributing to the rainforest collapse"(Andreoni, 2024; Christofaro, 2022). These are headlines and news we see in worldwide newspapers and discussions on social media. The discourse around the conservation or exploitation of the Amazon rainforest has transcended local and then scientific circles, permeating public consciousness and media narratives around the world and enhancing public opinion about the forest and its socio-environmental dynamics (Wonneberger et al., 2020). With their authoritative, unilateral voice and analysis, newspapers construct and disseminate narratives that influence public understanding and engagement with environmental challenges influencing decision-making and the political agenda (Sierra Caballero et al., 2020). Newspapers re/create a powerful discourse while defying the agenda, "the good", "the bad", "the wrong", "the right", "the thinkable", and "sayable" (Neuburger, 2008). In an age where information is as vast as it is accessible for many, the medium through which socio-environmental issues are communicated plays a critical role in shaping societal perceptions, positions, and decision-making. Social media platforms like X (former Twitter) are believed to offer an open space where diverse voices, including the marginalised, could express their views and mobilise for change (Khosravinik, 2017, p. 582). The traditional unidirectional formats, such as the newspapers, partly became integrated into these pluriversal social networks, accompanied by the millions of users who could now express their opinions in real-time through these platforms. Likewise, these social platforms became discourse re/creators, replicators and vehicles for debate; however, these discourses could put the same or even greater pressure on regional Amazonian dynamics, decisions and policy-making. In addition, social media discourses generated and replicated in and out of the Amazon forest can fall into the portrayal of a homogenised Amazon region or present a partial reality, excluding local discourses, alienating voices (Sierra Caballero et al., 2020) and legitimating powerful actors and their control over space and natural resources (Neuburger, 2008). In particular, discourses on natural resources have been used to exert power within the so-called global north and south (Escobar, 1996; Machado Aráoz, 2010). For this reason, researchers have called for traditional and social media research on socio-environmental issues to regain insight into the local social

dynamics of power and inequality in the public sphere discourses and acknowledge all voices (Hansen, 2011; Neuburger, 2008). This article, embedded in decolonial pluriversal theory, aims to analyse the narratives around the Amazon, moving beyond a unilateral and hegemonic understanding of socio-environmental dynamics to a deeper exploration of discourses that recognise the complexities of the Amazon and the plurality of voices and their roles.

Therefore, this article analyses and correlates Brazilian newspapers and the social platform X, aiming to critically analyse the Brazilian Amazon forest socio-environmental media discourse configurations while trying to identify marginalised voices and discourses. Furthermore, to understand heterogenised dynamics and the configuration of local discourses, this study is conducted on news and tweets about and from Pará—the State with the highest deforestation rate in the Brazilian Amazon rainforest in recent decades(PRODES, 2023). We answer the following questions: a) What are the socio-environmental discourses about Pará's Amazon forest in social media and newspapers? b) How are they configured? and c) Which voices are heard and which are excluded? To achieve this, the national newspaper Folha de São Paulo (FSP or A Folha), the state newspaper O Liberal (OL) and tweets in Portuguese about the Amazon forest and Pará were selected to find and analyse articles related to socio-environmental dynamics in the Amazon forest, particularly in Pará. The search was conducted from October 1, 2020, to September 30, 2021. This research contributes to understanding how socio-environmental issues are framed and debated locally, what stakeholders are marginalised, and underlines the importance of media discourse with a decolonial pluriversal approach to navigate the complex landscape of socio-environmental dynamics. The article is structured as follows: Chapters 7.1 and 7.2 introduce the role of media influence in the Amazon region, followed by a presentation of the pluriverse in Chapter 7.3. The research area and the media platforms are presented in Chapter 7.4. Chapter 7.5 presents the methods and steps to conduct the analysis. Then, in Chapter 7.6, we present the results, where a quantitative and qualitative analysis conceptualises the media discourses, accompanied by a discussion that integrates the pluriversal approach. Finally, 7.7 concludes the article.

7.2 Role of media in shaping the Amazon socio-environmental discourses

Social and traditional media play an enormous role in defining and giving meaning to socio-environmental issues for stakeholders and the wider public (Mempel & Bidone, 2023). Much of our socio-environmental understanding and knowledge comes from or is replicated by different media sources (Hansen, 2011). Its influence is not limited to perceptions and positions towards environmental issues of public and/or political interest; it goes beyond influencing how the socio-environmental environment is seen, understood, and appreciated by cultures and societies, both individually and collectively (Escobar, 2016; Hansen, 2011), and expands towards the legitimization of governance and stakeholder interventions (Mempel & Bidone, 2023). Therefore, media discourses hold a significant power while re/producing the single truth and veracity (Escobar, 2018, p. xii). Nevertheless, these discursive platforms, both traditional and social, face many challenges, such as the monopolization of the truth, re/presentation of the veracity, the biased, unbalanced, or fake representation of reality, political and economic influences, marginalization and homogenization of voices, and the oversimplification of complex dynamics, etc.(Entman, 1993; G. M. de Oliveira et al., 2024). They are essential in de/constructing power relations and socio-economic influences. Discourses and their interplay with power structures form a dynamic and evolving framework, which changes through time and space (Neuburger, 2008). Moreover, social and traditional media discourses significantly impact perception and decision-making at the local level (Oliveira et al., 2024), particularly for the Amazon region, which, in the last decades, has constantly been the focus of national and international media.

7.2.1 Impact of newspapers discourse in the Amazon

Newspapers have historically been one of the most important sources of information for the general public on environmental concerns, especially those affecting the Amazon rainforest. Hegemonic one-way newspaper discourses have established a paradigm of discursive power (Khosravinik, 2017, p. 583), centring and framing their discourses based on possible influences. Historically, at the local level, newspapers have served as a way to know the daily "relevant" news, political agendas and activities in the region, while at all levels, mainly since the 80s, their

work has presented some Amazon realities, such as raising awareness of deforestation, biodiversity loss, indigenous rights, and the consequences of climate change in the region (Neuburger, 2008). By emphasizing scientific findings, field reports, and expert viewpoints, newspapers have tried to contextualize and present the Amazon's worldwide ecological importance and the historically selected relevant socio-environmental dynamics (Costa, 2008). However, this often increases pressure on the forest and its inhabitants.

For many years, the Brazilian Amazon was presented in the traditional media as an open inhabited space, a monotonous and homogenous region full of resources and with a profound need to be developed and inhabited (Luft, 2005, p. 69; Torres et al., 2017, p. 47). Many slogans (e.g. *"integrar para nao entregar"* and *"Brasil gente para enfrente"*) and even cartoons such as *"Sujismundo"* created by the dictatorial government presented a unilateral discourse describing the need to develop the region, occupation of the land, and resource and territorial defence (de Souza Silva, 2021; Torres et al., 2017, p. 47). This helped legitimised the military developmental processes during the 1960s and 70s when the "inhabited" region started to face new profound socio-environmental changes by introducing mega developmental projects and unplanned migration (Torres et al., 2017, p. 53), which led to severe socio-environmental implications and impacts to the date.

Furthermore, since Brazil's democratization (1985), the diversification of voices in the newspapers has increased as environmental scientific research in the region (Costa, 2008; Tello & Neuburger, 2023). The 90s framed the environmental media "boom" in Brazil, as many editorial houses opened the environmental and/or science sections in their publications (Costa, 2008), associations and institutions were conformed to research the environmental media discourses, and universities put the media research into their curricula (Hansen, 2011; Mempel & Bidone, 2023). In 1992, within the Rio Summit context, voices that were not presented or heard started appearing in the local and international newspapers; NGOs, activists, and researchers got an opportunity to make their voices heard by disseminating the current Amazon socio-environmental dynamics (Costa, 2008; Mempel & Bidone, 2023). Since then, hundreds of national and international NGOs and groups of activists attended the call to protect the "lung of the world" and arrived in the region, bringing their external expert point of view to document and or monitor the deforestation processes and local issues and disputes (Leão,

2017; Wesz Junior et al., 2021). While it led to enormous support for activism research and conservation, it also intensified external pressure on the local socio-environmental dynamics. In recent decades, scientific and traditional media discourses have been considered substantial participants in media dissemination on digital platforms. The social platforms are at a reachable distance to the hand and provide real-time information about the Amazon forest and its dynamics, leading to several regional transformation dynamics(Hansen, 2011; G. M. de Oliveira et al., 2024).

7.2.2   Social media influence on the Amazon dynamics

The use of social media has rapidly spread across the world in the last decades. These platforms offer an easily accessible space where people can make their voices, needs, positions, opinions, etc., visible about environmental issues, climate change, or deforestation in the Amazon. A wealth of information about Amazon is available in real-time in many places worldwide through publications, images, and videos. The sense of interaction with millions of people by "only" typing in the cellphone and the opportunity to become or procure a discursive influence makes them attractive discursive platforms to observe or participate on. Therefore, many stakeholders can engage on social platforms and consolidate discourses and narratives. Khosravinik (2017, p. 582) explained that it could be argued that traditional media, which concentrated power in a unidirectional discourse, was replaced with a new participatory form of constructing narratives with social media. This led to a new form of participatory decentralized and democratised communication and a shift of discursive power (Khosravinik, 2017, p. 582).

Even though these platforms are multidirectional, they might fall into power structures where a select group of people re/produces discourses influencing and impacting the reality of the Amazon (Costa, 2008; Luft, 2005, p. 43; Sierra Caballero et al., 2020); such as traditional media that feeds back information to social platforms (Sierra Caballero et al., 2020). For instance, in June and July 2019, the National Institute of Space Research (INPE) reported a 28 per cent increase in the rate of fires in the Brazilian Amazon. However, it was not until August of the same year that NASA corroborated the information on its Internet platform, that a large wave of international traditional media documented and discussed the large fires occurring in the Amazon and Pantanal regions (Voiland, 2019). In the same way, social platforms began to talk about deforestation, fires and their

causes, accompanied by the hashtag #PrayforAmazonas, or #SOSAmazonia, which quickly became a worldwide trending topic on the social platforms (BBC, 2019a). These events brought international pressure, drawing the attention of political and social leaders, activists, and other stakeholders who made their opinions known about the situation and Bolsonaro's pro-agribusiness policies (Barlow et al., 2020). President Macron of France spoke out against these policies, pointing out that they had impacted the monitoring and conservation of the Amazon, favouring deforestation, and engaging in a Twitter discussion with President Bolsonaro. This led even the group of 7 (G7) to propose discussing funding policies for the conservation and protection of the Amazon, as it was determined to be "an international crisis"(BBC, 2019b). Furthermore, in 2020, the impact of wildfires on Amazon was higher; in this case, the media focused on documenting the effects of COVID-19 in the region, which generated less influence on social platforms and international and national media towards the forest (Dauphin, 2021).

These examples of the media influencing socio-environmental dynamics in the Amazon highlight the importance of the media and the challenges in re/producing discourses and narratives. These re/productions of narratives shifted from traditional to social media and finally merged, potentially hegemonizing discourses and realities. Therefore, we should recognise that traditional and social media discourses must be critically analysed, identifying the issues, the framing and the voices heard and marginalised within them (Hansen, 2011). This will help us to understand the different and heterogeneous realities of the Amazon rainforest and move away from the hegemonic voices and discourses. Furthermore, it allows for a more pluriversal perspective of the Amazon region.

7.3   The pluriverse, as counteract to the homogenisation of discourses

In exploring the media discourses, we are aware of how they can shape the socio-environmental, socio-economic and political realms and dynamics of Amazon's everyday reality. In doing so, we are not suggesting that there is a fundamental separation between the digital and offline worlds, but rather that there is a connection between the discursive practices (Khosravinik, 2017, p. 586), and a connection with other types of discourses (e.g. (non)scientific knowledge production discourses). These discursive lines might present two colonial patterns in particular. First, it establishes a possible hegemonic paradigm where the

discourse is taken towards a singular direction, where privileged groups might show us how they want us to see the world (Escobar, 2018, p. xvi) and present what modernity should look like. Second, these powerful and hegemonic discourses might marginalise voices, displacing oppressed voices and stakeholders as their interests do not take part or have a place in the construction of modernity. Maldonado-Torres (2007) explains that our daily lives are steeped in the realities of coloniality. The prevailing belief that Western modernity is the pinnacle of human achievement should be interrogated, as it reveals intrinsic links to a global system characterized by racial constructs and capitalism. This system perpetuates itself through its particular Enlightenment-derived methods of re/producing knowledge and discourses (Maldonado-Torres, 2007).

Consequently, deconstructing hegemonic discourses is essential for enabling inclusive discussion that recognises diverse realities and fosters all stakeholders and their discourses and narratives (Escobar, 2016; Querejazu, 2016). Pluriverse thinking is counteracting hegemonic discourses. It is about the ethical practice of otherness, involving a more profound concern for non-hierarchical structure, equity and social justice (Escobar, 2018, p. xvi); it is about a world where many worlds can fit (EZLN, 1996a). The pluriverse fosters the "manifestation of multiple collective wills"; these are expressions and discourses of diverse group intentions that demonstrate a firm belief in the real possibility of a different world (Escobar, 2018, p. 16). It critically challenges the hegemonic universal world; however, it identifies it as another world and accepts it as another world that needs to be interconnected with the different worlds(Escobar, 2018; Querejazu, 2016). The concept of the pluriverse suggests a framework for the conceptual and applied re/construction of discourses that support the importance of local contexts, justice and the intricate interconnections between people, species and the environment (Tucker, 2023).

Within this context, it is essential to highlight the critical relation between the Amazon socio-environmental dynamics and the discourses re/production and its authors. The pluriverse theory allows us to critically navigate the discourses and steer the front lines along the marginalised of the dominant (discoursive) system in and about the Amazon region (Barros & Resende, 2022, p. 17).

7.4 Research area and platforms

Parts of the essence of the Amazon forest
Human forest interactions, Critical Soundscapes project (2024)
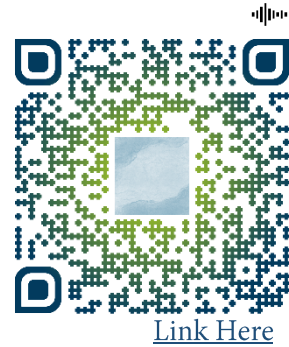
Stakeholders in the Brazilian Amazon and the state of Pará

The Brazilian Amazon is located in northern Brazil and encompasses nine states (LEI No 12.651, 2012). It contains 5,016,428.27 km^2, including the states of Acre, Amapá, Amazonas, Maranhão, Mato Grosso, Pará, Rondônia, Roraima, and partially the states of Maranhão, Mato Grosso and Tocantins(LEI N° 12.651, 2012). Currently, it has more than 29,8 million inhabitants and is in a rising trend (Amazônia Legal em Dados, 2024).

Historically, it has engaged with different migrating movements, developmental processes, and national and international pressure. Since pre-colonial times, indigenous people have fought for resources and land (Coy & Neuburger, 2009). Then, during the colonial period, many people settled on the river banks, now known as *"riberinhos"*. Furthermore, *"quilombolas"* (populations of enslaved women and men escaping from slavery) were established (ISPN, 2024). Also, many migration waves happened during and due to the First and Second World Wars and then during the military government (Oliveira, 2017; Torres et al., 2017). The many historical discourses talking about the immense region's whole of resources unravelled in *"caboclos"*, *"posseiros"*, *"seringueiros"*, *"camponeses"*, *"pioneiros", and "garimpeiros"* (smallholder, squatters, rubber tappers, farmers, pioneers, miners, respectively) among other traditional and new communities settling in the region (Oliveira & Torres, 2005; Torres et al., 2017). These historical dynamics have a transcendental influence on the regional inhabitants' discourses and storytelling, strengthening narratives and decision-making and carrying many socio-environmental effects to date. Since the 1990s, numerous researchers, NGOs, and media sources have increasingly documented the region's socio-

environmental challenges (Imazon, 2015b; Kohlhepp, 2002a; RAISG, 2020; Tello & Neuburger, 2023), including topics such as land distribution and grabbing, socio-environmental justice, construction of mega developmental projects, mining, logging, resources extraction, deforestation, extensive monoculture plantations, and cattle ranching, etc. (RAISG, 2020). These publications have also had profound impacts at the local level (Neuburger, 2008).

Pará is not exempt from the historical migration waves and developmental processes (Torres et al., 2017). Pará hosts many challenges and stakeholders, with the highest accumulated deforestation rate and the most populated in the Legal Amazon region. It is the second largest state with an extension of 1.245.870,740 km2, just under Amazonas, and the most inhabited, with a population of 8,120,131 million (IBGE, 2024). Its accumulated deforestation rate from 1988 to 2023 is 170.046,00 km2 (PRODES, 2024). Many policies and mega projects have been implemented in the state, causing stakeholders displacement, violence, injustices, unplanned migration, illegal mining, logging, and resource extraction, among others. (RAISG, 2020; Weißermel & Azevedo Chaves, 2020). Many groups of stakeholders are currently part of the daily forest dynamics. For example, there are around 400 "quilombolas" communities and 80.974 indigenous people in 77 indigenous lands, 27 extractive reserves and 1,030 rural settlements that inhabit Pará (Brisa, 2023; EMBRAPA, 2023; ISPN, 2024). However, many of these stakeholders have been historically marginalised and excluded. In the 1970s and 1980s, groups such as Movimento dos Trabalhadores Rurais Sem Terra (MST) or *seringeiros* (extractive rubber communities) had a global scope, intersecting with Brazilian political dynamics due to their activism (Coy & Neuburger, 2009; Villas-Bôas et al., 2018). However, in the 1990s the scope shift to indigenous populations (Instituto Socioambiental, 2024b; Procópio, 2009). These explains that, subaltern voices might shift in time, depending on the dynamics and circumstances. Thus, some subaltern groups may be heard, but many groups have never been heard. The number of challenges and its protagonist make the state an area where discourses and their implications considerably impact local socio-environmental dynamics; therefore, an area where pluriversal and critical discourse analysis are highly needed to unveil the discourses and their authors.

7.4.1   The newspapers

The two analysed newspapers were selected based on their high distribution, both at a national and local level, topics coverage, and the availability of their digitalised

printed versions, facilitating the distribution of their discourses and re/production. Both newspapers are members of larger media groups, highly relevant to Brazil's social and political environment, which has brought criticism to them. First, these are an excellent example of media systems in the hands of large corporations (Sierra Caballero et al., 2020), driving preferences and manipulating opinions (Sodré, 1998, p. 388). Also, these newspapers have engaged with governments and mobilised positions and opinions (Carvalho et al., 2015; Santos & Costa, 2022; Sodré, 1998, p. 388). Finally, it has been specified that there is a significant international (mainly from north-west countries) influence on these Brazilian newspapers (Sierra Caballero et al., 2020). In the following subchapters, we will introduce the analysed newspapers.

Folha de São Paulo

The Folha de São Paulo, founded in 1960, is part of Grupo Folha, founded in 1921(Grupo Folha, 2024a). Since its creation, it has addressed the agendas of the political and economic elite (F. A. F. Azevedo, 2016; Lattman-Weltman & Chagas, 2016). It is a nationally distributed and daily printed newspaper based in the financial capital of Brazil, São Paulo, thousands of kilometres away from the Amazon region. It distributes 366,089 paid daily exemplars, making it the most distributed newspaper in 2021, with a monthly digital and paper-based audience of 22,2 million users (Grupo Folha, 2024b). It has grown so much in the Brazilian scope that since 1994, collabors with the New York Times in its printed versions. According to the Reuters Institute, 55 per cent of the population trusts the newspapers when addressing and criticising the national agenda (Newman et al., 2021), as FSP declares itself a non-partisan organization (F. A. F. Azevedo, 2016; Mont'alverne & Marques, 2022). However, many studies claim that FSP is an instrument that participates in the re/production of political and economic discursive realities, taking part since the military government to more present events such as presidential impeachment and national climate change agenda (Marques et al., 2020; Mont'alverne & Marques, 2022; Santos & Costa, 2022). Its scope is diverse, as in its editorial, it is possible to find sections such as editorials (where the newspaper opinion influencers write their daily comments), politics, world, market, daily, health, science or environment (depending on the day), sports and illustrations. They also produce special issues on particular topics (e.g. Agrofolha) or public or private companies or institutions that ask for space in their editorial.

O Liberal

Founded in 1947 in Pará's capital, Belém, O Liberal was created as a political means by the Social Democratic Party to compete with the extinct Folha do Norte newspaper, owned by the political opposition (Biblioteca Pública "Arthur Vianna," 1985, p. 271). After several ownership changes, in 1966, it was bought by Romulo Maiorana (Biblioteca Pública "Arthur Vianna," 1985, p. 272; Carvalho et al., 2015). Currently, Roulo Maiorama's "Liberal group" is one of the principal media organisations in Northern Brazil, integrating more than 15 media networks (Carvalho et al., 2015; Grupo Liberal, 2024; Pinto, 2006). Despite OL not presenting data on their printed version distribution, some web pages mention about 40 thousand daily printed newspapers (Wikipedia, 2023; Wikiwand, 2024). Nevertheless, OL presents robust data on their digital contributions, having 5 million monthly visits to their web page (Pimentel, 2023). Since 2013, it has collaborated with the New York Times, becoming the 4th Brazilian newspaper with this collaboration. The newspaper's scope goes into different topics; its editorial's main sections are the front cover (small resume of the daily main news), cities, politics, panorama, culture, sport, and miscellaneous.

7.4.2   Social media

Platform X

In 2022, 161,6 million Brazilians over ten years old used the internet, meaning more than 87,2 per cent of the population (Belandi, 2023). Of those, 93 per cent use the internet, and 83 per cent use social media daily (Belandi, 2023). Only behind India and Indonesia, Brazil is the third country in the world with the most use of social media; among the most used, we can find Instagram, YouTube and X (Pacete, 2023). Today, around 22 million people in Brazil use the social platform X (L. F. Azevedo, 2024). X is a micro-blogging platform that allows the so-called tweets of 280 characters (Hale et al., 2024), making it not the most accessible or user-friendly for many people. However, although it is the most used social media in Brazil, it is part of a discursive re/production platform where traditional media feeds information in tweets, and then these tweets are disseminated in other more popular platforms such as WhatsApp (Hale et al., 2024; Sierra Caballero et al., 2020). Therefore, X is prevalent among public opinion influencers, such as Brazilian politicians, journalists, researchers, activists, and public and private

institutions and companies, among other stakeholders (Hale et al., 2024; G. M. de Oliveira et al., 2024).

7.5   Methodology

The methodology contemplates two main parts: the first corresponds to the newspaper's articles selection and codification (Chapters 7.4.1 and 7.4.2), and the second to the X's tweets selection and codification (Chapters 7.4.3 to 7.4.5). After the first screening in both parts of the methodology (newspapers and social media X), it was decided that only one topic should be analysed further, as it was highly referred to in tweets and articles. Therefore, a second screening was developed for agriculture and forest topics.

7.5.1   The newspaper data collection and selection

The newspaper-printed digitalised version of Folha de São Paulo and O Liberal was read daily from October 1, 2020, to September 30, 2021. The first selection of articles based on environmental issues related to the Brazilian Amazon in the Pará region or that included Pará (e.g. when talking about the whole Legal Amazon or Amazon biome) was gathered during this daily reading process. The first collection retrieved 359 articles for FSP and 1343 for OL. Once the collection was done, Citavi software was used to organise and categorise the data. A categorisation set was developed, and the articles were identified by environmental topic. Some articles were identified as part of two or more topics depending on the information in the article's body. Some categories are agriculture, biodiversity, climate change, forest (deforestation), greenhouse emissions, mining, trade/commerce, and food, water and energy security (RAISG, 2020; I. C. Vieira et al., 2008).

After perceiving the thematic relevance given by the Newspapers (see Chapter 7.6.1), in a second screening, two inclusion parameters were included to identify the relevant articles for a pluriversal analysis:

   a.   the article's topic is forest and,
   b.   the article identified on agriculture.

Then, the articles selected for both journals discuss agriculture and forests within the article. Within Folha de São Paulo, 25 articles combined these parameters, while 50 were in O Liberal (see Table 6).

7.5.2 The codification plan

A codification scheme was created using the software MaxQDA 2022 to analyse the particularities of each article further. Three main things were identified:

a) To understand the article's basic structure and possible relevance given by the newspaper editor for publication. Aspects such as the section in which the article was published, its length, the type of article, and whether graphics or photographs accompany it were coded, and

b) The article's content. Where the article's topic, the region it referred to, and

c) the stakeholders involved were coded and analysed.

7.5.3 The X data collection

The data was collected using the API 1.0 from X, which retrieved publicly available and unique tweets. The collection occurred between October 2020 and September 2021 and contains tweets from October 1, 2020, to September 30, 2021. It searched for specific words and Portuguese language within a particular time range. These types of searches are proven to retrieve Tweets faster and create a more extensive data set (Dongo et al., 2021). As the aim was to collect information from Portuguese-speaking people and discuss the state of Pará and the forest, a specific string query was determined to retrieve the Tweets (see Table 6). The systematic search was carried out as follows;

(1) We used the following words in Portuguese for the search query;

    a. "Pa" AND, as the acronym of Pará to define the geographical region, and

    b. "Amazônia" OR "Amazonica" OR "Amazonas" "Amazon" to identify the geographical region and relevant tweets discussing the forest.

(2) We follow the specifications according to the X search engine;

    a. When using quotation marks for a word ("), the scraper searched for the specific word.

    b. We used the conjunction AND to use two or more terms in the same search query (e.g. "Pa" AND "Amazônia").

    c. We used the conjunction OR to use one or the other terms in the same search query (e.g. "Pa" AND "Amazônia" OR "Amazonas").

This instruction means that these words, combined, could appear in the user name, text, as a hashtag, or part of a hashtag (e.g. @user_amazonia, #amazon, #SOSamazonia)

7.5.4 Exclusion and inclusion parameters

In the second step, the Tweets were saved in. xslx format and screened for the first time to identify topics referred to the query string applied (n=8732). We follow the next rules to retrieve or exclude the articles for analysis.

(1) The tweets were selected as "YES" (this means to be analysed) (n=3138);

    a. when the article was directly related to the string query and in addition to land or forest use, tenure, and/or management topic when reading the tweet.

    b. The word "Pa" was selected in the query as a relevant word when referring to the acronym of the state ("Pa" is the acronym for "Pará")

(2) The articles were classified as "NO" (this means excluded for not meeting the specific parameters (n=5594)). The exclusion parameters were:

    a. When reading the text, it was noticed that the tweet was unrelated to the topic (e.g. talking about Covid in the Pará's Amazon) and

    b. The word "Pa" was selected in the query as an exclusion parameter when referring to a thing (e.g. "pá" means "shovel" or "spade") or a preposition (e.g. "para" means "for"). This last parameter excluded a high percentage of tweets.

(3) Then, a second screening was conducted, adding two inclusion parameters:

    a. The tweets identified with the topic of forest and,

    b. also identified on agriculture.

After the second screening, 1013 tweets were selected (see Table 6). The next chapter presents how the tweets were codified and classified.

7.5.5 The X codification plan

A codification scheme was created using the software MaxQDA 2022 to analyse the particularities of each tweet further. Here, two main things were identified:

a) The tweet´s structure and relevance in the platform. Here were codified things such as the topic, connectivity (if it contains reposts, quotes, comments, and likes), and the accompanying graphics, videos or photographs.

b) The tweets's position. Here, the topic was identified by its storytelling, the region referred by it, and the stakeholders involved.

During a year, the digitised print version of FSP and OL and tweets provided access to the production and reproduction of discourses related to the socio-environmental dynamics and the Brazilian Amazon rainforest of Pará. In total, 359 articles from FSP, 1343 from OL, and 1013 tweets were retrieved. The following subchapters present:

a) An overview of the newspapers and X socio-environmental agendas;

b) Then, quantitative characterizations of the articles and tweets related to agriculture and forest are shown, along with a qualitative summary;

c) Finally, the summary and the seventeen most retweeted tweets[4] will be used to discuss the newspaper's and Twitter users' positions on the topics and stakeholders.

7.6 Results and discussion

7.6.1 Overview of the yearly socio-environmental media agendas and trends

This chapter provides an overview of many relevant events during the year. It is appropriate to present a general scope of the environmental topics and newspaper

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[4] Due to scientific ethics and data protection, the names of the accounts and the tweets selected will not be displayed in the article. However, they are going to be analysed without revealing personal data.

agendas through time as a reference for Chapter 7.7 on agriculture and forest discourses. During the period analysed, many topics were found in

a) the daily news,
b) opinion columns or editorials (comments from the editor, editorial board or columnists),
c) reports (more elaborated than news, including small comments or interviews), and
d) interviews.

Both newspapers presented a strong relationship between socio-environmental, political and economic topics. For instance, both newspapers had a "health" section reporting the daily cases, casualties, and vaccination average. Another topic strongly related at this time to the pandemic was the economic challenges, including high inflation, unemployment, poverty, and a severe crisis in energy and gas; in addition, topics about land reforms, sexual education and human rights were partially found during the year. Many of the newspaper articles presented a highly politicised context. According to newspaper columns and editorials, political instability in the country was reported during this time, and a breach with international country partners, accompanied by many polemic discourses from Bolsonaro´s administration, such as "*Brazil above everything, God above everyone*", "*The Amazon, being a humid forest, doesn't catch fire*" and "*passing the cattle*". When reaching for socio-environmental topics, OL presented more articles related to Pará and Amazonia regional dynamics during the year, while FSP presented articles about São Paulo and many more regions in Brazil. Nonetheless, both presented many articles with National and International focus. Table 6 presents the topics found in the newspaper and tweets. As many topics were found, a general overview of some events reported and discussed by the newspapers and X during the year is presented next.

Regarding the newspapers, in October, most of the socio-environmental articles in OL were related to Bolsonaro´s Law and Order Guarantee, which includes the arrival of military forces to Amazon to procure monitoring and enforce the law in response to the wildfires from June to September 2020. FSP and OL highly reported the fires' impacts on the Amazon and Pantanal regions. In November, many articles talked about the fragmented relationship with the just-elected president of the USA, Joe Biden, and the possible repercussions of Brazil´s environmental (mainly OL) and climate change (mainly FSP) agenda. In the same

month, both newspapers reported the blackout of the state of Amapa. These blackouts were related to a severe drought and the country's high dependency on hydroelectric energy. December and January had a continuity with the energy and climate change topics. However, many articles were presented on the successes of agricultural production targets. In February, the headlines were about Bolsonaro´s policies on reducing Amazonia monitoring and enforcement funds. March already saw an increase in articles on climate change, but in April, in the context of the climate leaders' summit, articles on climate change (mainly FSP) and Amazon conservation (mostly OL) increased considerably. FSP also presented much news on the Mercosul negotiations and the European parliament's positions. In May, FSP presented many articles on the proposal and worries about the land regularization policies, enhancing land appropriations and further deforestation, while OL exposed the Yonomanis' fight against irregular mining and the enhancement of the Ferrogrão project[5]. June and July had another increase in news related to Brazil's drought and energy production. FSP mainly documented this problem while OL was documenting the wildfire season in the region. In June, Belém, the capital of Pará, hosted an international bio-economy congress, and many articles presented reports and news. In July, FSP also highly documented the wildfires in the Amazon.

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[5] Trans amazonic train project.

Table 6 Amount of news and tweets per topic

Topic	Newspapers/Platform		
	FSP	OL	X
Agriculture	69	288	257
Biodiversity	76	250	268
Climate Change	40	109	-
Energy (security)	62	260	-
Forest (deforestation)	60	337	332
GHG	14	68	-
Infraestructure	22	248	-
Mining	9	127	156
Trade/Commerce	54	287	-
Food (security)	12	84	-
Water (security)	96	208	-
Total*	359	1343	1013
Total retrieved for agriculture and forest analysis**	25	50	215

*The newspaper articles are linked to more than one topic. Consequently, the total represents the number of articles retrieved per newspaper but not their linkages to one or more topics. The tweets were related to the more dominant topic (e.g., if the tweet talks about deforestation and then mentions other dynamics, such as fire, it is recognised as a forest (deforestation) topic). ** A second parameter was applied to deepen the discourses on the most frequently mentioned topics, agriculture and forest (in blue) (see 7.5.4).

Finally, in August and September, both newspapers presented several topics already discussed since February: energy production and security, the G7 and Mercosul implications, were the main topics in FSP, while in OL, the Ferrogrão project and the rise in electricity and products cost, and wildfires and biodiversity loss were the main topics.

Figure 11 Number of newspaper article´s topics distributed over time*

O Liberal   **Folha de São Paulo**
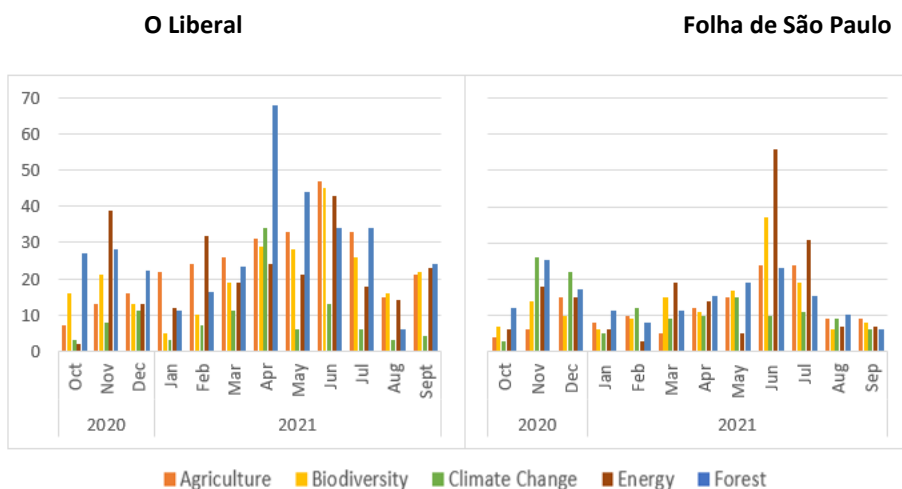
**The most frequent topics were agriculture, biodiversity, energy (security), climate change, and forest (deforestation). *The number represents the topics attributed to the article, as an article could be related to more than one topic.

In X, as a public space, many topics and stakeholders participated. The tweets were re/produced by politicians, public and private organizations, writers, traditional and digital media accounts, and private individuals. It was possible to find tweets, replies, links, videos and photos. On the general agenda, over half of the tweets found after the first screening were related to COVID-19. Other tweets were associated with sports, cultural events, tourism, and religion. Furthermore, it was perceived as a highly politicised platform with many positions, pro or against Bolsonaro´s policies (mainly agricultural or developmental) and discourses. On the socio-environmental tweets, unlike the newspapers, and due to the number of tweets found, the classification was conducted based on a single topic. Therefore, more than one topic can be presented in the tweet (e.g., the relation between climate change, logging, and wildfires), but the most predominant topics were used as a central catalogue: agriculture, biodiversity, forest, and mining (see Table 6 and Figure 11). During all the months, the discourses accompanied the public socio, political, economic, and environmental agenda in Amazon and Pará, as some of the tweets had traditional media content in Portuguese, such as links or images presented by traditional media sources. Other tweets contained links to scientific sources, from Brazilian institutions and Universities, and to different social media platforms such as YouTube or Instagram. At this stage, finding a

different discursive trend in social media was out of scope due to the volume of tweets and the number of topics analysed being re/productions of traditional media sources. Most of the tweets during the year were about agriculture and forest-related topics, which will be examined in the next chapter in further detail.

In synthesis, the two newspapers had increased news and reports on different parts of the year. Notably, OL presented many news articles in November and June related to the drought and Brazil´s hydroelectric energy dependence. In April, the climate summit provided news and reports on deforestation, biodiversity loss, and conservation. Due to Amazon's international scope and the climate summits, FSP reported many articles related to climate change in November and May. And in June and July, many reports were made on energy issues. However, while sometimes not being the direct most transcendental topic, it was found that agriculture and forest-related topics are the most predominant topics in numbers and are persistent throughout the year (see Figure 11). Finally, the tweets also present an increase in forest topics in May and September, as the newspapers trend, and a persistent rate of forest and agriculture topics over the year (see Figure 12).

Figure 12Number of tweets´ topics distributed over time
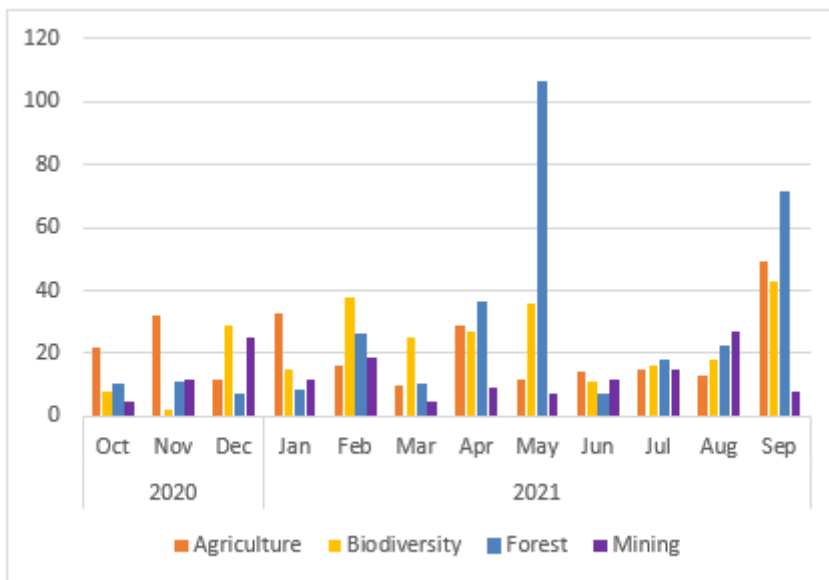
It was decided to focus on and combine two discursive topic proposals to get a critical, pluriversal approach toward the discourses and stakeholders who

re/produced them. Hence, to further identify particularities (pluriversalities) in discourses and authors, a second inclusion parameter focused only on the relation between agriculture and forest, the two main identified topics in the media during the year. For these two thematic linkages, it was possible to identify 24 SDS articles, 50 OL articles, and 215 tweets (see Table 6).

7.6.2   Media construction of agriculture and forest discourses: the where, when and what

In the following, a quantitative characterisation of the newspaper articles and tweets will be presented to delve qualitatively into the issues and stakeholders mentioned by the newspapers.

Newspaper articles and tweets characterization

Article's sections. As presented before, FSP has a national scope; hence, the number of articles is fewer than that of OL when referring to agriculture and its relation towards the Amazon forest. Nevertheless, 25 articles were found in FSP, while 50 were found in OL discussing both topics (See supplementary material). Many FSP articles were found in the Environment section (n=10) and five in the Editorial (opinions) section. The Market and Special Issues sessions had 3 articles each, and the Science, world, power, and Agrofolha had 1, respectively. As of the OL, articles were found mainly in the Panorama section, which contains the Economy (n=23), Politics (n=8) and International (n=2), then in the Cities section, which includes Actualities (n=13). Finally, two articles were found in the Opinion (columns) section. This already sets a track to identify where the newspapers set the agriculture in the forest topic; at the regional level (OL), the discourses are positioned in the economic sections, while at the national level, they are more positioned towards the economic and environmental sections.

Construction of the newspaper articles. In considering the construction of the article, three things were identified: the type, the length and whether it contained graphic support (e.g. photo or image). Regarding the type, we identify news (stories told of the event), interviews, reports (more elaborated stories containing interviews or further research), and opinion columns. When considering the length, it was identified as small (some paragraphs, just single statements), medium (less than half a page), and large-size articles (half or more of a page).

The graphic support was identified as if it contained graphic support or not and if this graphic was the most prominent on the newspaper page or not.

Then, FSP presented six news articles; half of them were large, and only one presented a main graphic as support. It also offered 12 reports; eight were large-size, and seven showed a main graphic. There were five opinion columns, two small and three medium-sized columns, and none had a graphic. Finally, there was an extensive interview that presented a main photo. OL printed 24 news articles, 9 were large (7 had a main graphic), 8 medium (3 had a graphic), and 7 were small (none had a graphic). There were 8 opinion columns; five were medium-sized, and 3 contained a graphic. There were 17 reports; 14 were large, and all contained a graphic; the other 3 were medium-sized and did not have a graphic. Finally, no interviews were presented in OL.

Construction of the tweets. Five things were identified when considering the construction of the tweets. The amount of reposts, quotes, comments, likes, links, and graphs. Of the 215 tweets, 50 had retweeted, which were retweeted between 1 and 322 times. The most commented tweet had 854 comments, and the number of tweets with comments was 61. One hundred twenty-one tweets had at least one like. Links were attached to 39 tweets (to videos and other web pages), and 44 had graphics. Finally, 74 tweets had no interaction (no likes, quotes, etc.)

Regions presented in the articles. From the 25 FSP newspaper articles, 16 speak about the Brazilian Amazon as a region, and 11 speak about Pará. Other states less mentioned are Amazonas (n=1), Mato Grosso (n=3), and Rondônia (n=1). Also, there are mentions of the Pará municipalities of Altamira (n=1), Belém (n=1), Novo Progresso (n=1), and Itaituba (n=3). Finally, the articles were also related to United States of America (n=2) and Europe (n=1). Regarding the 50 OL newspaper articles, 30 articles speak about the Brazilian Amazon as a region, and 16 are about Pará. Other states mentioned were Amazonas (n=1) and Mato Grosso (n=2), also the Pantanal region was mentioned (n=1), The municipalities of Apui (n=1), Lábrea (n=1), Sao Felix de Xingu (n=2) and Jacarecanga (n=1) were mentioned—finally, 1 article talks about United States of America, and 5 about Europe as a region.

Regions presented in the Tweets. The state of Pará was mentioned in all of the tweets; apart from that, the Legal Amazon was mentioned 3 times, Acre 4 times, Amazonas 28 times, Mato Grosso 30 times, Rondônia 25, Tocantins 3 and Maranhão 1 time. In 22 articles, different regions (smaller than a municipality) were mentioned.

Distribution and themes in the articles. During the year, FSP presented two peaks in their content related to agriculture and forest dynamics, one during November and December (agricultural production targets) and a second in June (drought). OL presented a peak in March and April (climate leaders' summit) and one in June (fires in the Amazon) (see Figure 13). As discussed in the previous chapter, trends could help us identify the media agenda by taking a closer look at the news presented and the marginalization of other topics, as we will examine further in the next chapter.

Distribution and themes in the tweets. The distribution of tweets during the year depended on particular events that happened during the year. There are two peaks where the tweets became abundant. In Jan 2020, President Macron from France made a speech to avoid dependence on Brazilian soy, which triggered the production of tweets around the topic. In September 2021, the INPE report on fires in Amazon again raised the number of tweets about Amazon.

Figure 13 Distribution over the year (2020-2021) in percentiles of news and tweets on forest and agricultural topics
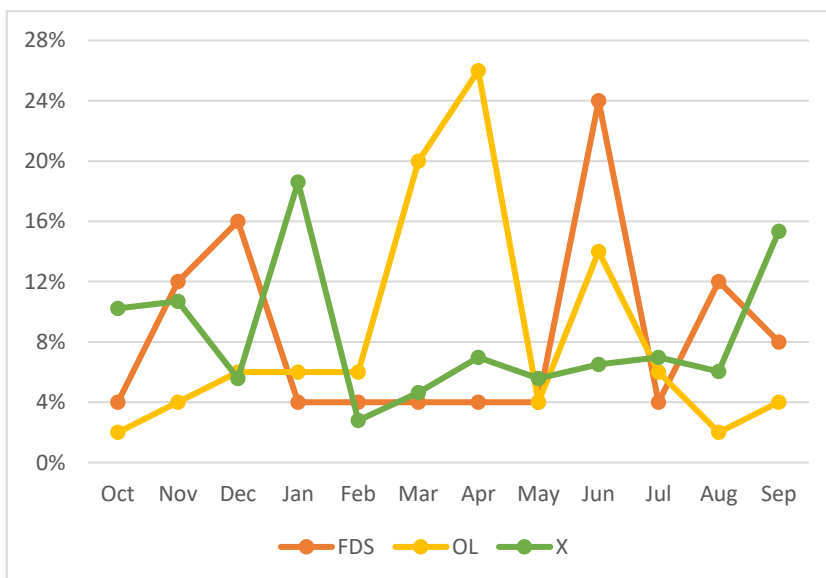
Newspaper portrayals: a summary of the where, what and who

This chapter will present a summary of the topics presented in the newspapers, and X. One article, one report, and one opinion column per newspaper were selected to explore the position of the papers in depth in each case. Also, it presents the summary of X, where the 17 tweets most retweeted were selected for further analysis.

Folha de São Paulo. In their news articles, FSP mainly referred to the Amazon region and only once talked about Pará in solitary. Apart from being related to agriculture and forests, the topics of deforestation, productivity, conservation, and development were presented. On two occasions, these topics were also related to regional fires. In these articles, the topics were heavily policies as the stakeholders mentioned while talking about these topics were the national government, particularly Bolsonaro, Mourão and Salles (former President, vice-president, and environmental minister, respectively). Indigenous populations and extractive unions were mentioned but addressed as homogenous groups in the Amazon. European and North American countries are also mentioned in these articles. As in three of these six articles, Brazil takes a defensive position towards remarks on forest conservation. In these three articles, the foreign countries accuse development and agricultural policies of causing deforestation and fire. In none of the six articles is anyone explicitly held responsible for conservation or deforestation (fire, etc.). The article that talks about Pará in solitary is to discuss the Ferrogrão project. The article presents environmental conservation as a "smokescreen" for not giving access to the development project in the Amazon (Debate ambiental sobre Ferrogrão é cortina de fumaça, diz ministro, April 27, 2021, Folha de São Paulo). As in this article, the newspaper often presents news with colonial and developmental discourses without taking a position; however, the messages are being replicated.

In their reports, FSP referred the topics to the Amazon region; however, on three occasions, Pará is referred to in solitary and on one occasion, a report mentions some municipalities in the state. The second main topic in the reports is climate change and, on fewer occasions, fires. In the reports, there is a higher diversity of stakeholders involved. In reports, Universities, national NGOs and research institutes often participate, offering data on agriculture, climate change, conservation and deforestation. Also, indigenous and traditional communities are often mentioned; however, these are not heterogenized. Furthermore, farmers' unions, small and large-scale farmers, and agribusiness were mentioned highly. In two reports, someone is held responsible for conservation; one is the Rural

Producers, and the other is the agribusiness and the rural producers. In these two cases, the reports promote agricultural production, mentioning that rural producers and agribusiness do not want to burn the land they are working on; they only want to work. In four reports, the deforestation is put on land grabbers, private owners (rural producers), and miners. Finally, the report where Pará is referred to in solitary exposes land grabbing along the federal road BR-163, blaming landgrabbers for deforestation and rural producers for occupying the land. It shows that NGOs such as Greenpeace Brasil monitor and alert the authorities about the issues (Estudo aponta indícios de grilagem ao redor da BR-163, November 13, 2020, Folha de São Paulo).

The opinion columns base their comments on the Brazilian Amazon dynamics. One opinion column presents Pará singularly. The topics were related to developmental and agricultural policies and climate change. The opinion columns are always related to international topics, bringing European and North American discussions on climate change and deforestation and the interaction to Bolsonaros policies and positions. The commentators often position themselves against Bolsonaro's administration, saying it is not doing enough to counteract deforestation. Also, expressing that Bolsonaro's positions are not beneficial to international relations (Ruína Amazonica, October 2, 2020, Folha de São Paulo). In this case, one commentator presents the government as responsible for conservation.

In summary (see Figure 14), in the FSP, articles present two discourses: conservation and production. They placed the rural producers (and less, the agribusiness) as the ones who deforest the rainforest but simultaneously as the region's developers. In the news articles that ministers or the government defend/promote development and agricultural policies, the authors (and newspapers) present themselves as neutral but replicate these discourses that might promote colonial dynamics and deforestation. In the reports, Universities, NGOs and research institutes share information on deforestation, monitoring and conservation. Agricultural production and forest combined are prominent in sections talking about economics and international relationships. In news and reports, international relationships are presented as highly important for the conservation of the Amazon. Climate change is prominently discussed in all analysed newspaper articles. The only area where the government (Bolsonaro administration policies and ministers) was criticised is in the Opinion Columns; however, these columns are small-sized and have no graphs to call for attention.

The newspaper often marginalises local stakeholders, as they are not mentioned or are not heterogenized.

Figure 14 Linking most mentioned stakeholders and topics presented in Folha de São Paulo articles*
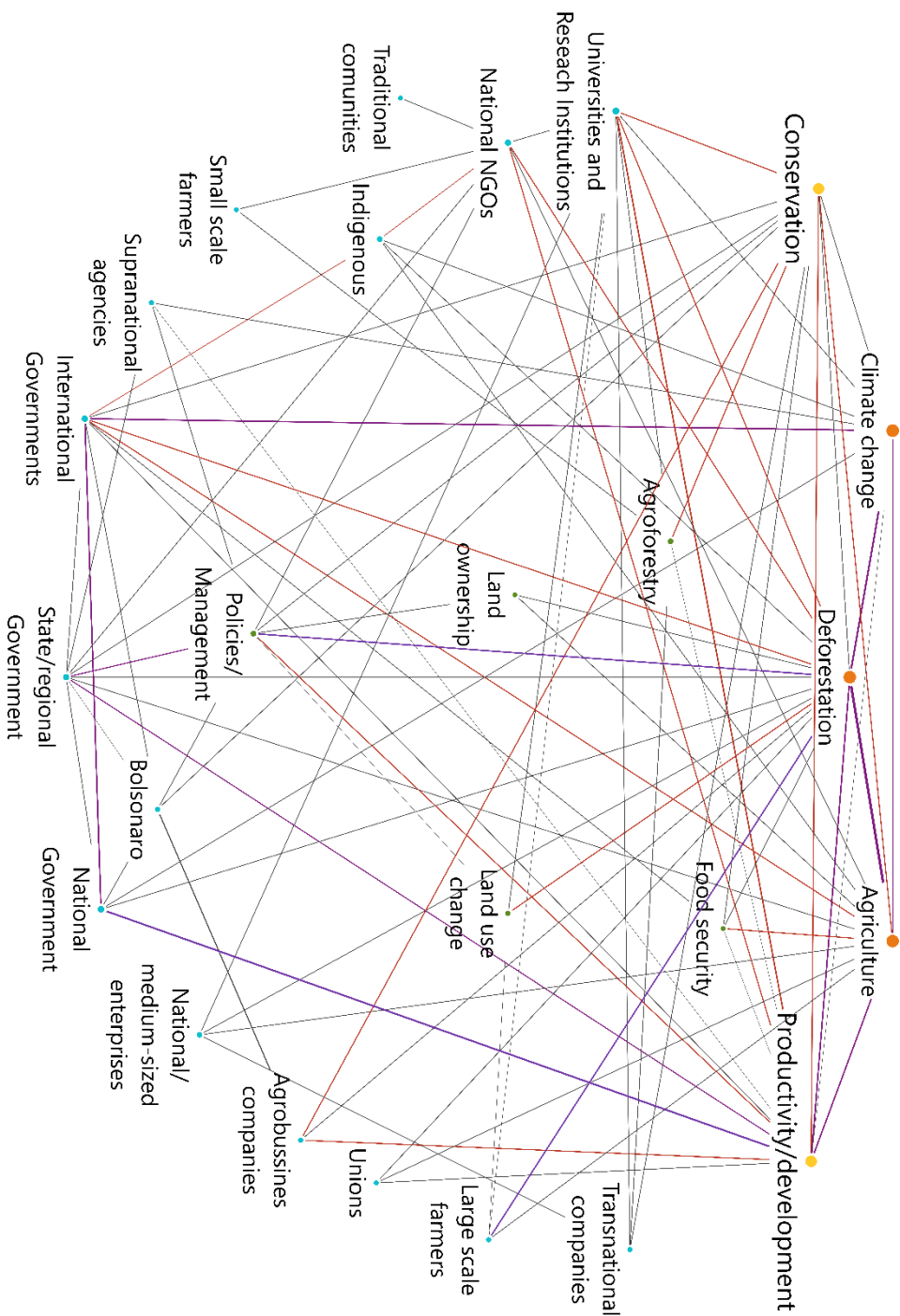
* The blue dots represent stakeholders, the green dots topics, and the orange dots are the most prominent topics or stakeholders in the tweets. The letter size and dot size are linked to be most often related to topics or stakeholders. The purple lines refer to higher connectivity; the red lines represent slightly less connectivity, and the black lines have frequent connectivity.

O Liberal. The news articles present a similar trend as FSP, as most are based on the Brazilian Amazon dynamics. Moreover, just seven of them are singularly about Pará. However, these engage with particular dynamics in the municipalities of Pará. The news presents a wide variety of topics. Apart from agriculture and the forest, many talk about deforestation and conservation (particularly monitoring), as well as the public policies of both federal and local governments in the region. Another topic mentioned is development and productivity; a few others talk about financing for the countryside and how this can help conservation. However, they do not present a wide range of stakeholders. Some articles discuss the federal government and its actions, mentioning Bolsonaro and the environment minister. However, in most articles, it is noted that many regional projects and their managers are referred to in these articles. Figure 15 presents the interlinkages of topics and stakeholders in OL news, reports and opinion column articles. One of the articles, for example, talks about the Institute for Conservation and Sustainable Development of the Amazon and the work of its manager, Mariano, in the municipality of Jacareacang. Here, agroecology is presented as a sustainable method of agriculture in the forest. In these articles, local issues and local projects can be better reflected (Desenvolvimento sustentável é estimulado, April 11, 2021, O liberal). However, there are also discussions on international issues. For example, funds are sent from European countries for Amazon projects.

The OL report articles are much more focused on the state of Pará, but only one mentions a particular municipality of the State. In the reports, the topics were much more focused on production, deforestation, and land issues' direct effects. In this case, the stakeholders also showed more variety; however, universities and research institutes were mentioned in more than half of the reports. Again, regional programmes were also highly mentioned, and comments or views from extractivist communities, traditional communities and small farmers' unions were also introduced. The reports also primarily presented Small and medium-sized enterprises. However, some reports present stories on the socio-environmental issues of agricultural production. For example, one of the articles talks about the increase of pasture areas in the forest. Data from governmental institutions shows that these areas are used for livestock and agriculture. However, it does not point out who is responsible for either conservation or deforestation (Pastagens crescem 112,5% em 18 anos, March 21, 2021, O liberal).

In this case, the opinion columns were mainly related to issues about the Amazon region and not specifically to Pará. The topics were diverse, as mentions of climate change, land use change and deforestation were presented. The commentaries

presented responsibility for deforestation two times, as well as the government and the agricultural industry. They often mentioned research institutes and universities to present deforestation and climate change data. The comments often put pressure on the local agricultural industry and rural producers and link the topics to climate change and carbon emissions. For instance, a column presents data on carbon emissions by one of the key municipalities on cattle production, and in this case, the local cattle industry is the culprit (São Félix do Xingu lidera emissões, March 7, 2021, O liberal).

In summary (Figure 15), In the articles dealing with local and regional projects, the newspapers position the government's work as sustainable and the way forward. The reports are more extensive and contain graphics, where many regional programs are presented, and more local stakeholders are mentioned; however, many are part of government institutions, NGOs, research and political institutions. There is a vast foment to agriculture production and sustainable agricultural dynamics such as agroforestry. These newspaper reports give space to small agricultural producers' views, making reports on environmentally sustainable production methods. Again, universities and research institutes share information on deforestation, monitoring and conservation and are involved in the sustainable agricultural reports. As in FSP, the local indigenous and traditional communities are often excluded, not being mentioned or homogenized. Also, there are many articles and reports on wildfires in the Brazilian Amazon and conservation and environmental sustainability. Opinion columns criticise the agricultural industry and policies with a scope of climate change and deforestation; however, these columns are small and have no graphics that complement the column. This consideration of sustainable agricultural practice, monitoring, and conservation might be due to the high number of national and international NGOs in Pará and the international conservation funding perceived by the state.

Figure 15 Linking most mentioned stakeholders and topics in O Liberal articles*
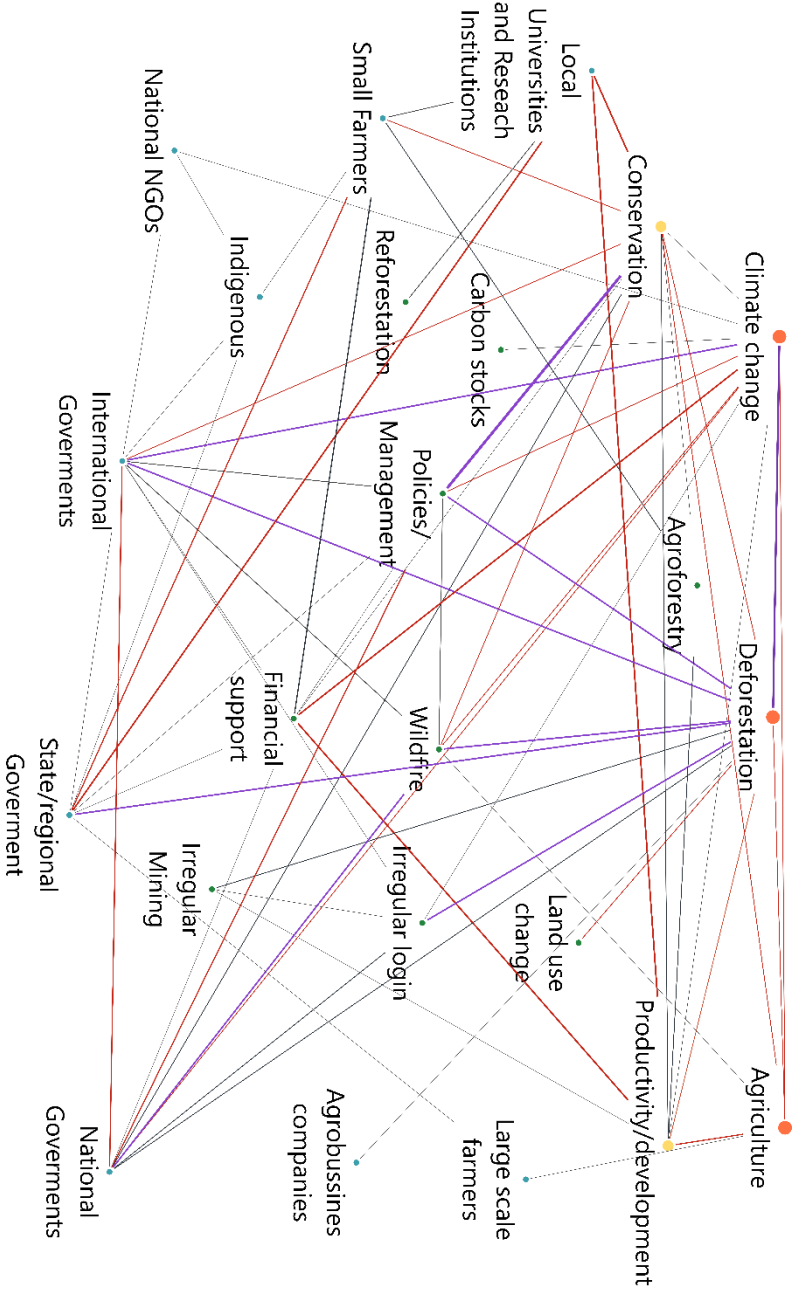
* The blue dots represent stakeholders, the green dots topics, and the orange dots are the most prominent topics or stakeholders in the tweets. The letter size and dot size are linked to be most often related to topics or stakeholders. The purple lines refer to higher connectivity; the red lines represent slightly less connectivity, and the black lines have frequent connectivity.

Social media X. The tweets were found to re/produce many current discourses on the global and local media. One example is the pick trends previously mentioned. The topics found were not so diverse due to the very accurate search. In addition to agriculture and forests, most of the tweets deal with conservation, fire, and climate change. The tweets mainly present positions in news or speeches related to production and conservation. There are many positions and feelings in the messages, as they talk about things that probably directly affect the authors of the tweets. The list of authors, both physical and moral persons, was found. It identified journalists (2), politicians (8), government institutions (4), news generators (TV, radio and newspapers Twitter accounts) (12), conservation institutes and NGOs (7), activists (3), academics (5), and satire accounts (1). The other authors could not be recognised as their biographies only included names. Figure 16 presents the linkages between issues and stakeholders most frequently mentioned in the tweets.

In order to identify what voices were heard more on X, the 17 most retweeted (because it replicates the message) tweets were selected to identify the discourses and their position. The tweets were retweeted between 5 and 332 times. Among the 17 tweets, there were identified 16 authors, six news accounts, one journalist, two NGOs (one made two tweets), one activist, three governmental accounts, one politician, one parody account of a politician, and one account that could not be identified.

The politician, two newspapers, one journalist, the unknown account, and two governmental accounts presented in their tweet's discourses favouring agricultural production in the Amazon and Pará. In their discourses, they talk about large rural producers and agribusiness; only one talks about small producers. From these, the tweet about small producers is the only one with a link to a newspaper that presents scientific information about production.

Two newspapers position themselves as neutral in their discourse. Both replicate news about production and its impact on production; however, they do not make any positioning in their tweet. One of these newspapers is the most retweeted of all the tweets. The other tweets are positioned against agricultural policies or agriculture. Two of them link to newspapers that have science-based information. Furthermore, two newspapers and one NGO are the only ones that mention traditional or indigenous peoples. Only one of these newspapers mentions a particular indigenous tribe and their struggle against land-grabbing. Finally, four

tweets, two in favour and two against the production discuss Bolsonaro's public policies, and one more author is against Pará's public policies.

These tweets that are the most retweeted on agriculture and forest for the state of Pará have a low amount of voices to be heard. And only in two tweets were voices marginalised, but more often heard than others (small producers and Indigenous) were heard. Also, these tweets mainly replicate voices and information generated in traditional hegemonic spaces, such as traditional media. In some cases, it was possible to find how the scientific information was instrumentalized to favour one or another discourse.

Figure 16 Linking most mentioned stakeholders and topics in X tweets*
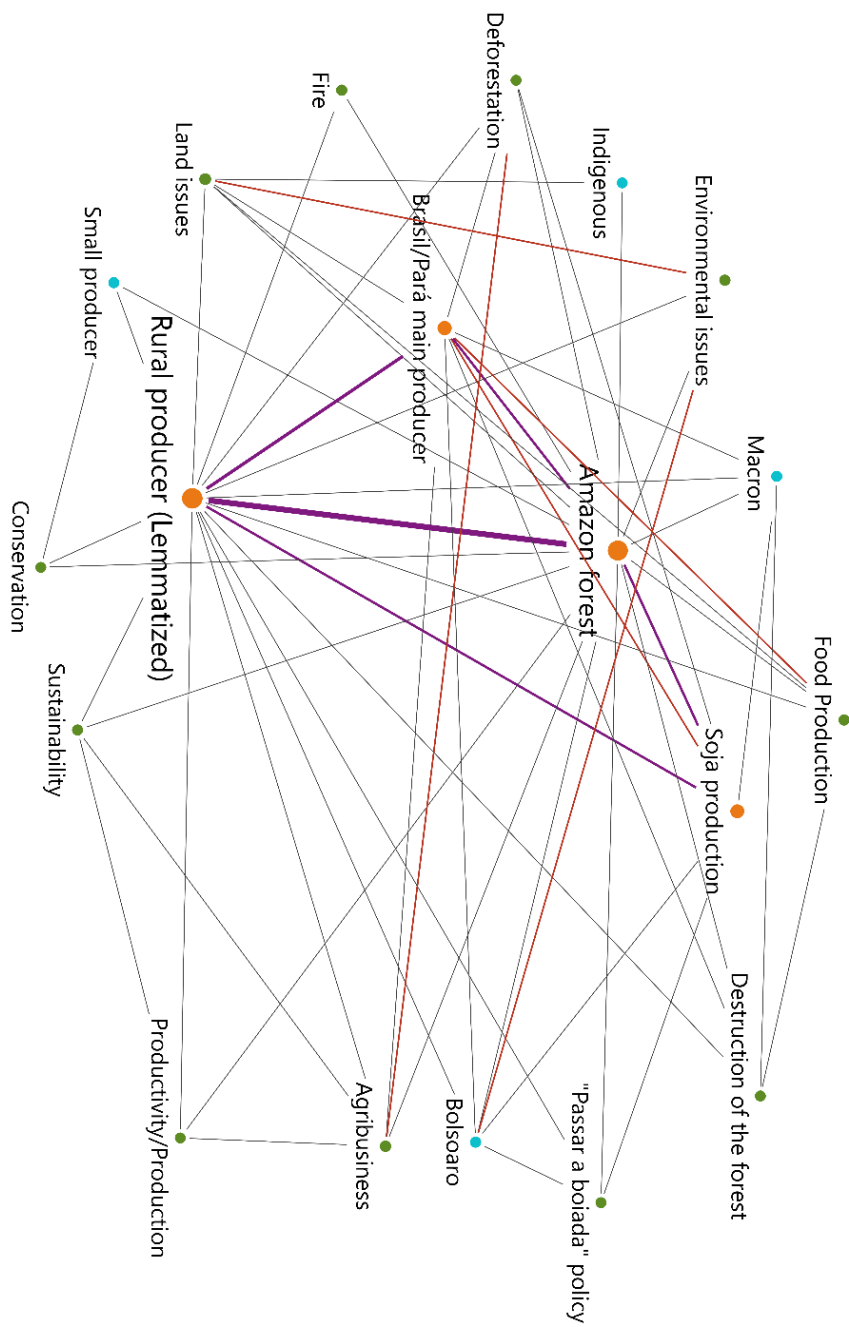
* The blue dots represent stakeholders, the green dots topics, and the orange dots are the most prominent topics or stakeholders in the tweets. The letter size and dot size are linked to be most often related to topics or stakeholders. The purple lines refer to higher connectivity; the red lines represent slightly less connectivity, and the black lines have frequent connectivity.

7.7   Conclusions

This article presents a novel undertaking of critical discourse analysis on the social network X and two Brazilian newspapers (one state and one national) on agriculture and the Amazon forest in the state of Pará. The research exposed the central dynamics that are exposed by national, local and traditional media. First, from a general perspective, all the articles of the two newspapers (Folha de Sao Paulo and O Liberal) were read for one year, and tweets were collected within the same time frame. The general themes were about the diversity in the country's political and socio-environmental life and its interactions with other governments. It also presented the significant presence that foreign governments have in the public life of the country and the impact it can have on the Amazon (e.g. the case of funds for the conservation of the Amazon rainforest). The article then delved more specifically into the issues of agriculture and forests, as they were the most frequent topics published by newspapers and authors of tweets.

First, we observed how the country's political life dynamics and certain events generated more news in some months of the year. We could observe how FSP had peaks in trends in its agriculture and forest topics due to circumstances such as drought issues and OL due to the climate leader's summit, while Twitter had peaks due to messages such as Macron's messages against soy production in the country.

It was found that the FSP newspaper focuses its discourse on production, talking about agribusiness and large producers and conservation from the international perspective of climate change and carbon sequestration. Rarely in this newspaper did he present local stakeholders in Pará, let alone heterogenise them. Its position was often neutral, yet it reproduced colonial and developmentalist discourses. Only its opinion columns presented a more critical stance on socio-environmental issues; however, they are small and do not mention local stakeholders. On the other hand, OL focused its discourse on production and conservation from a more local perspective. Agricultural production was strongly promoted from small to large producers. Traditional and indigenous communities were sometimes mentioned but were seen as homogenous groups. Those with a voice and space were the universities, research institutes, and NGOs participating in the reports, mainly on conservation or monitoring. Also, local agricultural projects and their managers had a chance to have a voice. Climate change was also a constant theme, possibly because of the number of NGOs in the region.

In X, the dynamics were similar to those presented in the newspapers since most hegemonic speeches were replicated in the social network. In addition, these speeches were the positions and feelings of the authors of the tweets. Of the 17 tweets selected for being the most retweeted, it was not found a great variety of topics or actors involved. The authors were politicians, other traditional media (newspapers, TV, radio X accounts), and governmental institutions that replicated the current discourses in traditional media or politics. It must be highlighted that the analysis showed almost non-presence of marginalised or less-heard voices, and the authors of the tweets barely mentioned excluded groups or populations. The most retweeted tweets were from authors already positioned in the country's public and political life. In this case, the social network X, which could be materialised as a pluriversal space, is dominated by the same hegemonic discourses on Brazil and the Brazilian Amazon.

As a whole, the three media presented mainly two discourses that intersect with each other: the forest's conservation and production in the forest. This discourse is generated from a win-win perspective for the ones in power. On the one hand, financial sources are generated through agricultural production, yet money and funds are also received for conservation. In the end, tremendous pressure is exerted on the local inhabitants of the Amazon, such as rural producers, *camponeses,* and traditional and indigenous communities, with the aims of production and conservation.

The article has certain limitations, especially for social media, since although X can give a voice to many people, not everyone has access to X. Perhaps there is also a bias in the age and educational level of the people who write on X. Also, with the development of technology, people (probably the younger generation or those attracted by new technologies) use other networks such as WhatsApp or TikTok. Therefore, the inclusion of more social media networks could be an enhancement in this type of analysis.

Finally, This research priory this mixed media approaches and opens the door as an inspiration and proof that this type of analysis is needed. In a world where social and traditional networks are increasingly at the fingertips of many hands and the click of a button, more analysis of traditional and social media from a socio-environmental and pluriversal perspective should be assumed in order to understand the colonial and discursive structures and to have a perspective on the

voices that are not represented in the hegemonic and not often pluriversal media discourses.

8 Rural producers' discourses on the Brazilian Agricultural Frontier: between local and external narratives on land and forest

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Accepted in Die Erde journal

Abstract

The Brazilian Amazon is a region deeply influenced by historical development dynamics and resource extraction. In it, rural producers are often held responsible for the increasing deforestation of the biome. This article explores the intricate relationship between national and global discourses and narratives of rural producers in Novo Progresso, an emblematic municipality located along the BR-163 highway on the agricultural frontier in the Brazilian Amazon. The study seeks to answer the question: How do rural producers' historical and present positioning and narratives shape land use and management on the agricultural frontier in Novo Progresso? To comprehensively understand these dynamics, the research incorporates the rural producers' narratives within the historical context of local, national and international discourses that contribute to land-related decision-making, migration, displacement, and socio-environmental issues, including widespread deforestation. The article situates the rural producers in three historical trends: from the construction of BR-163 to the current advance of the agricultural frontier. Through biographical interviews, the study connects the rural producers' narratives with national and international developmental discourses in and for the region, providing insights into how rural producers perceive the socio-environmental dynamics in NP. The results present various discourses, which have impacted biographies and local land dynamics, further developing socio-environmental issues. However, the position of the RPs in the

region and their biographies contribute to the discussion on determining how to deal with the region's socio-environmental issues.

Zusammenfassung

Das brasilianische Amazonasgebiet ist eine Region, die stark von historischen Entwicklungsdynamiken und dem Ressourcenabbau geprägt ist. In diesem Gebiet werden Agrarproduzent:innen oft für die zunehmende Abholzung des Bioms verantwortlich gemacht. Dieser Artikel untersucht die komplexe Beziehung zwischen nationalen und globalen Diskursen und Narrativen von Agrarproduzent:innen in Novo Progresso, einer bedeutenden Gemeinde, die sich entlang der BR-163 an der Agrargrenze im brasilianischen Amazonasgebiet befindet. Die Studie stellt den Versuch dar, die folgende Frage zu beantworten: Wie prägen die historischen und gegenwärtigen Positionalitäten und Narrative der Agrarproduzent:innen die Landnutzung und -bewirtschaftung an der Agrargrenze in Novo Progresso? Um diese Dynamik umfassend zu verstehen, werden die Narrative der Agrarproduzent:innen in den historischen Kontext lokaler, nationaler und globaler Diskurse eingebettet, die zu landbezogenen Entscheidungen, Migration, Vertreibung und sozio-ökologischen Problemen, einschließlich der weit verbreiteten Entwaldung, beitragen. Der Artikel ordnet die Agrarproduzent:innen in drei historische Entwicklungen ein, vom Bau der BR-163 bis zum aktuellen Verlauf der Agrargrenze. Anhand von biografischen Interviews verbindet die Studie die Narrative der Agrarproduzent:innen mit nationalen und globalen Entwicklungsdiskursen in und für die Region und gibt Einblicke, wie die Agrarproduzent:innen die sozioökologischen Dynamiken in NP wahrnehmen. Die Ergebnisse zeigen verschiedene Diskurse, die sich auf die Biografien und die lokalen Landdynamiken ausgewirkt haben und die sozioökologischen Problematiken verstärken. Die Position der Agrarproduzent:innen in der Region und ihre Biografien tragen dabei zur Diskussion über den Umgang mit den sozioökologischen Problemen der Region bei.

Keywords: Agricultural Frontier, Brazilian Amazon, discourse analysis, land-use change, local narratives

8.1 Introduction

The significance of the Amazon rainforest's resource management and its far-reaching impact on climate change is widely recognised (RAISG, 2020). Significant responsibility for the destruction of the biome is commonly put on the inhabitants of the region – in particular, the rural producers (RPs) (Azevedo, 2023; Chaves, 2022; Levy et al., 2023). However, it is crucial to delve into the historical context of colonial and "developmental" policies and programs in the Brazilian Amazon to comprehend the present-day pressure on the forest and the local stakeholders' dynamics (Escobar, 2004). These policies and governmental dynamics, identified in this article as discourses, have exerted considerable pressure on the region and shaped local socio-environmental dynamics. This has led to land-related issues, such as unplanned migration, displacement, and land grabbing (Rodrigues & Nahum, 2023), and has contributed to environmental issues resulting from unsustainable resource exploitation, leading to widespread deforestation in the region. Settlements of pioneers in the forest expanded many extractive dynamics, such as mining and logging, and constituted the origin of the agricultural frontier. This agricultural frontier dynamic is characterised by the rapid advance and expansion of livestock and monocultures, mainly cattle, soybeans, and corn (Rebello & Homma, 2005). As an example of this dynamic, in the 1960s, the state of Rio Grande du Sul was the only soy producer in Brazil. However, to compete in the international market, soybean production was intensified in 1990 in the Amazon forest (Fernandez, 2006; Wesz Junior et al., 2021), starting a growing trend towards privatisation and land concentration (Wesz Junior et al., 2021). Currently, soybeans are Brazil's second-largest export commodity (OEC, 2023), which is due to the transformation of vast tracts of land into soybean plantations, distribution corridors, and ports, the indirect land-use change, and the placing of immense pressure on land belonging to farmers, settlements, indigenous peoples, and communities, leading in turn to deforestation.

Although there has been a significant increase in agricultural frontier monitoring and research focused on deforestation (Rebello & Homma, 2005), there is a call to expand the local understanding of narratives and biographies as a key to promoting further policy improvement in assessing and targeting local stakeholders and promoting forest preservation (Escobar, 2016). Despite numerous top-down efforts to propose solutions, the tendency to generalise

regional issues and the lack of integration of local dynamics and perspectives have obstructed the effectiveness of the socio-environmental solutions presented. It has been shown that involving a diverse range of local stakeholders with multi-epistemic differences in the proposal and implementation of policies, plans, and projects leads to better outcomes for stakeholders in the community. This results in, or at least shows the way to, positive outcomes and achievable objectives regarding many matters, including land and environmental issues (e.g. Cruz Rodrigues et al., 2023; Gomes, 2023).

Following the above trend, this article introduces and correlates external discourses with Novo Progresso (NP) rural producers' (RPs) narratives and their impacts on land and forest. NP is a municipality founded within a recent historical development dynamic. It is one of the ten most deforested municipalities in the Brazilian Amazon and is a central part of a commodity distribution corridor, the BR-163 national highway. The article aims to respond to the question: How do the rural producers' historical and present positioning and narratives shape land use and management on the agricultural frontier in Novo Progresso? Biographical historical interviews were conducted with RPs to achieve this. The article examines how regional development in the Amazon has been perceived and discussed from political, economic, and social perspectives at both national and global levels in recent decades (in this article, the word "external" will be used to refer to these discourses) in terms of three historical trends: 1) migration and the start of the construction of the BR-163 highway (1972-1988); 2) the onset of external pressure on the region (1992-2006); and 3) the advance of the agricultural frontier (2007-2021). It names and categorises the RPs into the previously mentioned historical trends as 1) pioneers, 2) second-generation, and 3) soybean-generation.

The paper is divided into the following chapters: Chapter 8.2 explores the early national narratives on the occupational and developmental processes of the Amazon and the BR-163 highway. Chapters 8.3 and 8.4 focus on the research area and its socio-environmental dynamics. Chapter 8.5 focuses on the methodology of this research, particularly the data collection and analysis. In Chapter 8.6, we present and discuss the positioning and narratives during the three historical trends, and the narratives' correlation with past and present dynamics. We conclude with an overview of the farmers' dynamics of the region and the future of the land and forest.

8.2 The national historical discourses of occupation, resource exploitation and development

Throughout history, the Amazon rainforest has been renowned by its inhabitants and colonisers for its abundant resources. Therefore, there has been both national and international interest in the exploitation of resources. However, the forest's dense remote areas and challenging conditions kept it largely "untouched" (by white men) for a long time. Nevertheless, so-called "developmental waves" can be identified. Between 1879 and 1912, the rubber-extraction boom, promoted by the government, was fundamental to expanding human occupation in the Amazon area (Passos, 2019; Rebello & Homma, 2005). However, it brought several issues, including violent land appropriation, displacements, and environmental impacts (Quin, 2022, p. 17). Then again, during the presidency of Getúlio Vargas (1935-1945) and World War II, the Amazon was thrust into the spotlight. The demand for rubber prompted internalisation into the forest for extraction, contributing to a large transformational wave for the region (Oliveira, 2017, p. 47).

The following wave evolved during the Brazilian military government (1964–1985). Recognising the potential use of the Amazon forest as a "strategic and central economic area", in 1966, the Amazon Superintendency of Development (SUDAM) was created. During the 60s and 70s, Brazil was going through social tensions in the northeastern region due to the neglect of an urgently needed land reform, which worsened after a devastating drought in 1970 (Passos, 2019). This led to a geopolitical strategy agreement combining Amazon's infrastructure development and economic exploitation programs with a colonisation project to resettle the landless (Kohlhepp, 2002). Under the slogan *"homens sem terra para terra sem homens"* ("landless men to manless land"), the Amazon was presented as a solution for (avoiding) land reform (Kohlhepp, 2006; Passos, 2019). In 1972, the first National Development Plan (1972/74) was implemented, and the military used the media to strengthen Brazil's and the Amazon's "development" discourses. For instance, the televised cartoon Sujismundo brought messages such as *"Brasil gente pra frente"* ("Brazilians moving forward") (J. C. D. S. Silva, 2021). It outlined a strategy emphasising the National Integration Program (PIN), under the slogan *"integrar para desenvolver"* ("integrate to develop") as a crucial element in national development. This plan earmarked the development corridor of Central Amazonia (Pará and Mato Grosso state) to establish and connect

agricultural and agro-mineral centres (Kohlhepp, 2002; Oliveira, 2017, p. 114). The primary aims were to grant large economic entities access to natural resources and redirect migration to the Northeast Amazon region.

To materialise the PIN discourse, the government decided to open up the rainforest by building the highway BR-163. The military, in BR-163's early construction stages (1971-1976), cleared a strip of ~1,700 km of forest to connect the cities of Cuiabá (MT) and Santarém (PA) and established several new settlements and communities in between (see Map 3). The second stage of the military plan was to inhabit the newly opened-up forest area. The government promised families land and resources as long as they fulfilled their mandate to defend the region by occupation and habilitation with a form of production (Torres et al., 2017, p. 16). The government aimed to populate the forest using a new slogan, *"integrar para não entregar"* ("integrate not to surrender" – referring to the Amazonian territory), secure the borders, and procure national and international investment to initiate resource extraction and production. This action alienated the region's previous inhabitants, such as "*ribeirinhos*" and indigenous communities (Brito & Castro, 2018; Coy et al., 2017; Coy & Klingler, 2014; Fearnside, 2008; Rodrigues & Nahum, 2023; Torres et al., 2017, p. 65). Thus, "*camponeses*" (small farmers) families that mainly came from the southern states of Rio Grande do Sul, Paraná, and Santa Catarina (Torres et al., 2017, p. 67) generated the so-called *"invasão sulista"* (southern invasion). Consequently, the BR-163 highway, which was developed to occupy and facilitate the extraction of resources, eased colonisers' irruption into the forest. In 1974, the POLAMAZÔNIA program (1974-1980) sought to incentivise the integration and development of agro-industrial and mineral resources in strategically important areas of the Amazon for the national interest (Kohlhepp, 2006).

In addition, the prevailing national narrative, which promised that these new settlers would become the "heroes of the nation" through activities such as fostering development within the forest, resource production and extraction, and land protection, ultimately manifested itself in significant land and resource issues (BBC Brasil, 2008), as will be shown in Chapter 8.6. Following these developmental external narratives and policies, the region has experienced the infiltration of authoritarian, colonial, and capitalist dynamics (e.g. PIN and POLAMAZÔNIA), leading to land conflicts, deforestation, and rights abuses (Rodrigues & Nahum, 2023; Urzedo & Chatterjee, 2021); the Municipality of NP

is an excellent example of these dynamics, as we will further explore on Chapter 8.3, 8.2 and 8.6.

8.3   The research area: Socio-spatial dynamics of Novo Progresso

Novo Progresso is a municipality located in southwest Pará within the microregion of Itaituba. Its territory is over 38,000 km², with an estimated 33,638 inhabitants (IBGE, 2023b). Its geographical position and borders are of paramount importance to this municipality's historical and present dynamics (see Map 3). Historically, the continuous socio-environmental dynamics, mainly characterised by agricultural expansion, illegal mining and logging activities, land grabbing, and resource extraction, have led to 7,646.05 km² of accumulated deforestation since 2007, positioning NP among the ten municipalities with the highest deforestation rates in the Brazilian Amazon (PRODES, 2024). Nowadays, the region has become one of Brazil's largest livestock producers (Coy & Klingler, 2011) and is at the forefront of the agricultural frontier (Raimara do Reis et al., 2021) (see Chapter 8.2).

* NP shares a border with the State of Mato Grosso to the south. NP is adjacent to the Baú Indigenous Reserve to the east and the Jamanxim National Reserve to the west. As it borders two federally protected areas, the urban and rural developments have been concentrated on the margins of the BR-163 highway, which crosses the entire municipality from north to south (IBGE, 2023c; Prefeitura Novo Progresso, 2023). The closest large cities are Itaituba, Pará (~400 kilometres away), and Sinop, Mato Grosso (~600 kilometres away). The first is a major river port, and the second is a central agricultural production area.

Map 3 Novo Progresso´s location (left) and land configuration in the BR-163(right)
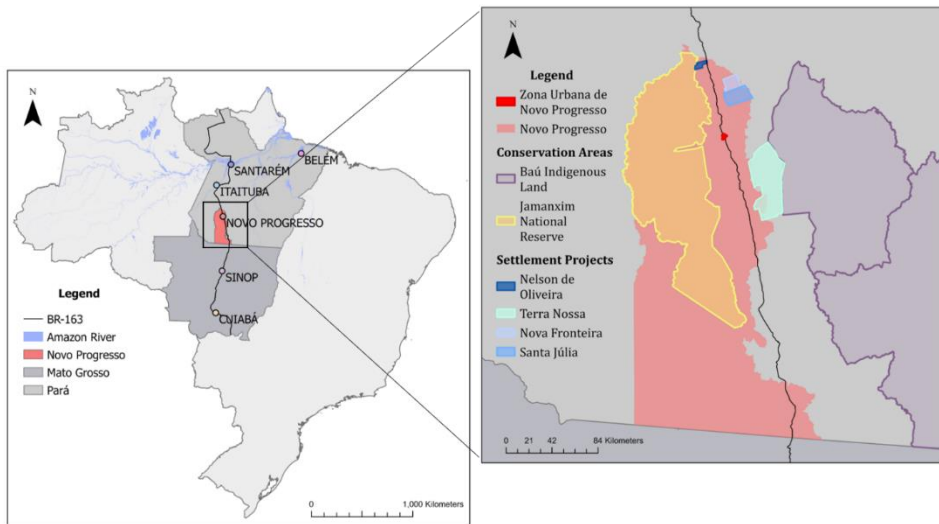
8.4   Novo Progresso: historical socio-environmental trends

A place of respite and social convergence next to the main lake.
Novo Progresso, Critical Soundscapes project (2024)

To fulfil the promises of land development, the Federal Government expropriated the southwest land of Pará in the 1970s within the PIN. By 1979, with the opening of BR-163, the first wave of pioneer families concentrated in the nowadays NP urban area (IBGE, 2023c; Passos, 2019; Prefeitura Novo Progresso, 2023) (see Map 3). In NP, the National Institute of Colonization and Agrarian Reform (INCRA) accompanied and endorsed the new settlers' right to clear the forest to declare them rightful landowners (Oliveira, 2017, p. 104; Torres et al., 2017, p. 54). INCRA encouraged forest clearing, informing pioneers that for every 50 hectares cleared,

they would receive double (100ha). In contrast to other regions along the BR-163, in NP, in the early years, the land was parcelled up into larger properties (Torres et al., 2017, p. 62), and the *"camponeses"* were instructed to clear the forest and obtain land rights (Oliveira, 2017 p. 162).

Moreover, the national and state authorities did not show a strong presence in the area during the first years. The lack of law enforcement generated violence and dispossession (Torres et al., 2017, p. 65). Additionally, the BR-163 highway was not paved, hindering internal mobility and the introduction of basic infrastructure, health clinics and hospitals, education, and electric power. Without solid governmental provision, the responsibility for distribution of resources and law enforcement fell to other sectors, such as irregular mining, logging and resource extraction, which for many years took the reins and strengthened economic and political dominance (Torres et al., 2017, p. 65).

With the democratisation of Brazil in 1985, many political changes occurred. In 1992, the Rio Summit brought external attention to the BR-163 and its rising deforestation rate. Since then, scientific research in Brazilian and foreign universities and institutions has grown exponentially (Tello & Neuburger, 2023). Amid increasing pressure from national and international public opinion, the government tried to control deforestation, but these attempts were unsuccessful (Imazon, 2015a).

In 1993, NP became a municipality with administrative rights in Pará (IBGE, 2023c; Prefeitura Novo Progresso, 2023). Bringing and creating law enforcement and external financial resources to promote farming, schooling, and health clinics was a considerable victory for landowners. In 1997, INCRA implemented a program on land distribution to favour smallholder families. It established two settlements, "Nova Fronteira" and "Santa Júlia", to host 200 and 300 families, respectively (see Map 3).

With the entry of Lula da Silva's (2003) Labour Party (PT) into government, policies changed considerably for the Amazon. PT governed as a progressive party, yet within the essence of "Ordem e Progresso" (order and progress), it left the extractivist projects to work around neo-extractivism (Andrade, 2022). New conservation, monitoring, developmental and land-redistribution policies significantly impacted NP. By the early 2000s, the region harboured 186 non-

governmental organisations (NGOs) that raised concerns about the effects of the paving of the BR-163 highway and the growth of soybean cultivation (Leão, 2017; Wesz Junior et al., 2021). This led to the 2004 BR-163 Sustainable Development Plan, which brought intensive monitoring in the region and the possibility of continuing the paving of the highway. In addition, the government sought to improve enforcement and created more than 500,000 km^2 of new Conservation Units, as deforestation was out of control. The National Forest Reserve of the Jamanxim was designed in 2006 to border the municipality and the cattle producers' farms (see yellow polygon in Map 3). Furthermore, in 2012, the new Forest Code was applied, which allowed amnesty for all those who had been deforested until 2008 (WWF, 2012).

Regarding land distribution, the settlements of Nélson de Oliveira and Terra Nossa were formed in 2006 in NP (see Map 3). However, all of these changes brought challenges for NP, including numerous conflicts and acts of violence against indigenous and rural workers residing in the settlements (Rodrigues & Nahum, 2023). In 2009, a new initiative of land regularisation was formalised, creating Law 11.952, "*Terra Legal*" (legal land). This law provided "the land regularisation of occupations within the Legal Amazonia" (LEI Nº 11.952, 2009). The programme announced it would regularise public land, serving more than 150,000 families. However, by 2014, less than 8,000 processes resulted in titles being issued (TCU, 2014).

Furthermore, significant efforts were made to regularise land, monitor deforestation and illegal activities, and audit extractives' dynamics. Examples of these are the creation of the previously mentioned Forest Code, including the design of environmental protection areas, the Rural Environmental Cadastre (CAR), and Licensing (LAR) (LEI Nº 11.952, 2009; LEI Nº 12.651, 2012). Likewise, external studies and forest monitoring by research institutions such as the National Institute for Space Research (INPE) created programs such as Real-Time Deforestation Detection System (DETER); many more efforts from national and international institutes, universities, and NGOs have also taken place.

In 2019, a conservative party came into power in the national government. The right-wing president, Jair Bolsonaro, abruptly changed the discourse about the Amazon and NP, reducing the monitoring and conservation program funds right from his early days as president. This included the increase of financial support and laws to favour agribusiness – the so-called "*passar a boiada*" (running the cattle laws) during his presidential term (Pereira et al., 2021). An example of this

was seen in the aftermath of the 2019 wildfires reported by INPE. During the "dia do fogo" (day of fire), there was a 300% increase in forest fires, with NP being at the centre of the fires (Instituto Socioambiental, 2024a); to date, this burned area corresponds to 300ha of soybean production (Cruz Rodrigues et al., 2023). Table 7 presents the excerpt of plans, projects and dynamics that influence the regional dynamics in Novo Progresso.

Table 7 Excerpt from Novo Progress historical plans, projects, and dynamics

Trend	Year	Plan, Project or Dynamic
<-- Start of BR-163 contruction and migration	1972-1974	National Integration Plan (National Development Plan)
	1972-1976	Construction of BR-163
	1974	POLAMAZÔNIA Program
	1974	First Pioneers in the region
	1985	Democratization of Brazil
	1988	Recognition of Indigenous land (Baú)
<-- Increasing External Pressure	1992	Climate Change Rio Summit
	1993	NP became a Municipality
	1997	Creation of Settlement Nova Fronteria and Santa Júlia
	2000-2002	NGOs arrival to the region
	2004	BR-163 Sustainable Development Plan
	2006	Creation of settlements of Nelson de Oliveira and Terra Nossa
	2006	Creation of National Forest Reserve of the Jamanxim
<-- Intensive Developmental Process	2007	Pavement of the BR-163
	2008	Creation of Programs Deter and PRODES
	2009	"Terra Legal" Program
	2012	Creation of the Forest Code (CAR and LAR)
	2019	Bolsonaro "passar a boiada" policy
	2021	Finishing paving of the BR-163

8.4.1　The regional agricultural frontier

Predominantly, in the southwestern region of Pará, the advance of the Amazonian frontier was driven by incentives for occupation and integration of the Amazon into the domestic market. In the 1980s, the occupation of the frontier intensified with the rise of timber activities associated with the growth of cattle ranching (Imazon, 2015b). Lastly, the apparent consequences of soybean expansion taking over former areas of cattle ranching in the region have been evident since the late 1990s. This expansion triggered a process, expelling producers to new regions (pushing cattle ranching and setting the frontier in motion) (Wesz Junior et al., 2021). Correspondingly, it is marked by increasing privatisation and concentration of land, conversion of grassland to soybean plantations, depletion of remaining forest areas, public land speculation, and pressure on local farmers' land (see Figure 17) (Rodrigues & Nahum, 2023; Wesz Junior et al., 2021).

The BR-163 paving process (2007-2021) facilitated the distribution of commodities (Rodrigues & Nahum, 2023). This contributed to more influxes of people, commodities distribution, deforestation, and increased land prices in NP. By 2020, cattle production already accounted for 632,411 heads, and is expected to grow through the years (IBGE, 2024) or change to monoculture as the deforestation rate increases (PRODES, 2024). The production of these goods accelerated the installation of logistical infrastructure that allowed these products to be exported, which fastened the region's conversion into a dynamic agricultural frontier led by the external market (Wesz Junior et al., 2021). Subsequently, the development and strengthening of monocultures like soybean and maize production in well-established regions, like Mato Grosso, started to drive producers outward to explore new territories – in this case, further north into the forest – propelling cattle-ranching expansion and pushing the frontier forward (Wesz Junior et al., 2021). This brought a new market for buying land, and a shift in its use. In 2009, one thousand soybean hectares were planted in NP; by 2022, more than twenty thousand hectares had been planted (IBGE, 2023a).

Figure 17 Novo Progresso Agricultural Frontier Dynamic*
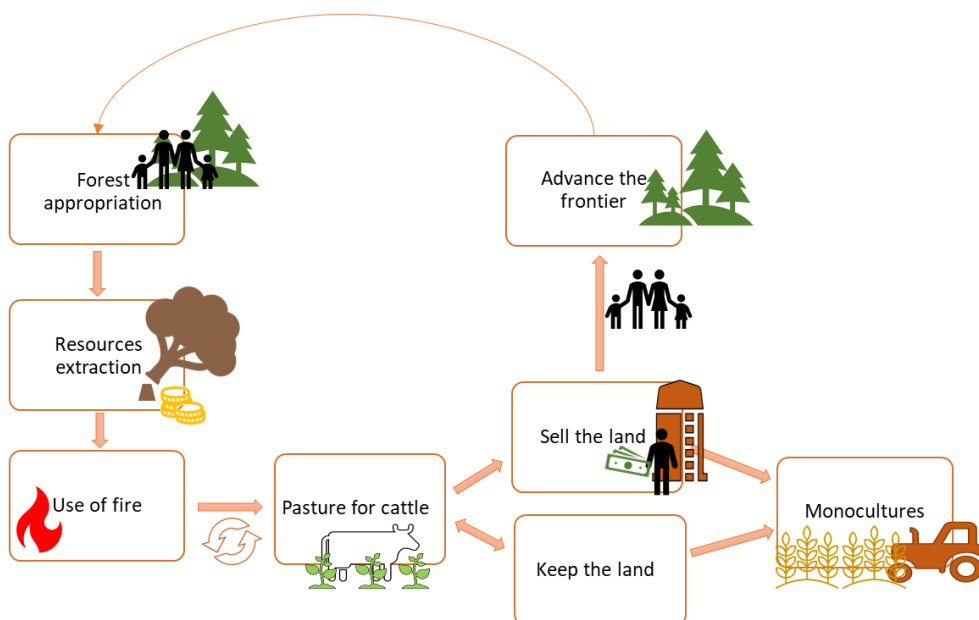
* The illustration presents one common scenario of the NP frontier: It starts with forest appropriation (legal or illegal) and then involves deforestation, where valuable timber and resources are extracted. Furthermore, the remaining land is burned, grasslands are established, and cattle are introduced. This phase is characterised by the recurrent use of fire to facilitate land clearing, soil restoration, and pasture establishment. Over the next few years, land that shows declining fertility or undergoes an increase in value will transition to soybean cultivation. If other farmers or companies buy the land, the previous landholders may seek new free and cheaper territories to start again, initiating an advance in the frontier.

8.5   Methodology

The chapter is organised in two steps. First, the biographical guiding questions and the data collection were developed. Second, a codification system was developed and applied to understand the RPs' narratives.

8.5.1 Biographical semi-structured guiding questions and rural producers' characterisation

To identify and understand the local narratives of agricultural producers, a set of biographical semi-structured guiding questions were developed for "*produtores rurais*" (rural producers who own or manage lands) in NP. These guiding questions were conducted in Portuguese and recorded upon approval using an adaptation of biographical and narrative methods, assisted by coffee tables (Carranza et al., 2023; Smith, 1989) and walk-along (Bartlett et al., 2023) methods at the farmers' addresses (landholding in private areas, communities, and settlements) along the BR-163 from March to June 2022. The information retrieved was combined with participatory observation.

The biographical semi-structured guiding questions allowed the interviewees to elaborate on biographical and historical topics and the municipality's past and present dynamics (Delory-Momberger, 2012). We used main and sub-questions, which let the interviewees explore and extend as much as they liked on the topics. Unlike the traditional method of biographical interviews, the interviews were conducted in a single meeting. The interview duration depended on the interviewees' willingness to express themselves and varied between 30 minutes and two hours. In each interview, qualitative data was obtained, including family migration history and previous labour activities, the relationship with other stakeholders, and their perceptions of land, production, and the forest.

We conducted twenty-nine interviews with 36 RPs. In seven interviews, RP couples participated, while in the other 22, the RP was interviewed alone. The RPs are commonly categorised based on the landholding size. Taravella and Arnauld De Sartre (2012) described "*colonos*" or "*camponeses*" as small farmers (~100ha), "*fazendeirinhos*" as medium-size farmers (up to 500ha), and "*fazendeiro*" as large-size farmers (>500ha). Based on this categorisation, we interviewed 13 small, 10 medium-sized, and 6 large-size farmers. Also, eleven of the 36 RPs have their land inside a federal settlement, which makes them engage in different dynamics from the others, as we will further explain. This article identified the RPs in categories between three historical trends presented in Chapter 8.1: The first category, the "pioneers," are RPs who arrived between 1979 and 1981 (n=15). Next is the "second-generation" category, consisting of second- or third-generation (sons or grandsons) regional owners who became RPs (i.e. they arrived with their pioneer families as teens or children and became RPs in adulthood) and those who came in the region between 1994 and 2001 to become RPs (n=9). Lastly, the "soya

producers" category includes all those from 2004 to 2017 (n=12). These last three categories will help shape the storytelling structure of Chapter 8.6.

8.5.2 Characterisation and codification

The codification plan was developed in MaxQDA software (VERBI Program 2022) to categorise the RPs and understand similarities and differences in their narratives. For this step, the interviews were transcribed in Portuguese, and for this article, the narratives were translated to English by the authors.

First, it explored the interlinkages within (1) their previous livelihoods and migration history and (2) facts that determined their arrival in the region, and their first impressions:

(1) We analyse the historical intentions and facts that determined their arrival in the region and first impressions of the area to understand personal migration histories and narratives and national and regional discourses by asking:
   a. Who told you/ talked to you about the region? Why did you come to the region?
   b. When did you arrive? How did you become a landowner?
   c. How was the land/community when you arrived?
   d. How did you intend to use the land when you arrived?
(2) We analysed the migration histories and stories to try to perceive the way they understand the land:
   a. by codifying the family and personal migration patterns as indicators limited to the national discourses and actions and their interlinkages with personal narratives,
   b. by codifying the individual's and family's previous economic activity, land tenure and use as a means to understand the integration of narratives with current dynamics, and
   c. by codifying the intentions and facts that determined their arrival in the region to understand personal narratives and national and regional discourses.

In the second step (3), we characterise the current factors that determine the socio-environmental and economic dynamics in the region:

(3) We analyse the contemporary aspects that shape the socio-environmental dynamics of RPs while:

   a. Identifying the RPs' relationship to land and forest to understand the connection built since their arrival, and
   b. Identifying the current socio-environmental dynamics and how they influence the RPs' livelihoods and decision-making (projects and programs, bureaucracy, external challenges, etc.).

After identifying the correlations in the RPs' narratives using the coding system, some RPs per category were selected to present their histories, stories, and narratives on land and forest. The parameters used to determine the RPs were the correlation between narratives with the other interviewees and the amount of information the RP provided during the biographical semi-structured interview.

8.6 Developmental storylines of Novo Progresso: Rural producers' histories, stories, and narratives

This chapter collects the narratives' correlations and tells the story from the biographical position of the RPs within the three historical trends mentioned above. Also, this chapter is written based on the RPs' collected opinions, narratives, and positions, and is only accompanied by some of the author's comments, mainly in the first and last paragraph of each sub-chapter.

8.6.1 Biographic storyline: Where did they come from, and why?
Many of the RPs' biographical stories start before the opening of the BR-163. Like many Brazilians, the RPs are no exception to the historical migration waves. Within the families of the RPs migration stories, it was found that the families (parents or grandparents) came from countries such as Germany, Italy, and Poland, among other European countries, and from Brazilian states from the northeast and south of Brazil, such as Bahia, Paraná, or Rio Grande do Sul.

The first RP interviewed arrived in NP in 1979, the last in 2017. Of the 36 RPs interviewed, fifteen arrived between 1979 and 1981, nine between 1994 and 2001, and twelve between 2004 and 2017.

Throughout their stories, it was found that no RP was born in NP. They maintained the previous migration trends and were born in southern or northeastern states, such as Mato Grosso do Sul, Paraná, and Rio Grande du Sul. Finally, it was identified if they had a transitional place (where they lived and worked before arriving at NP). It was found that only ten RPs came directly from

the place they were born. Some came from Argentina and Paraguay, and others came from states such as Mato Grosso du Sul and Paraná. Some regions where they were born, or which they used as a migration route, are places where agriculture was a big part of the state's or national income.

> I-5: "Well, my parents are from Rio Grande do Sul. They also came from a family of German descent [...] Then they came to Santa Catarina [...] I was born in Guraciaba. I've always lived on the farm, even in the south. I planted corn, beans and tobacco, all by hand, with an ox plough [...] Then, in 1980, we moved to Mato Grosso. My father bought a small farm [...] while working there; we already had this piece of land [...] In 2001, I sold all my cattle and bought another 90 alqueires[6] of land in Novo Progresso. I was left with 436 alqueires of land."

> I-16: "[...] He was a 'Bugre'[7] on my grandfather's side. My grandmother was Italian. So it was a mix. 'Bugre'– Indian, with Italian."

The RPs shared whether their family possessed land and/or worked as farmers before coming to the region. Most RPs stated that their parents owned land; of those, a few (n=3) worked in an unrelated farming activity. While sixteen did not own land; most of those worked on someone's land as farmers or cattle ranchers. Most of those who had land stated that the land owned by their families was insufficient for economically sustainable production for the family. Similarly, if this land were to be divided among family members in the future (among siblings), the amount of land would not be sufficient to sustain their livelihoods. They also expressed that the countryside was a proper place to raise children with values. Therefore, most stated they went looking for land (to many different places), as they knew how to work it and/or liked farming activities. All of them said that before arriving, they found, through different means (reading, hearing, or people telling them), that the region would be a place of opportunity to get land and grow personally and economically.

> I-16: "In reality, my father was always passionate about land [...] he wanted to have land and raise us here, as I told you. We were three boys,

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[6] This is a measurement unit used in Brazil. It differs from region to region. For this article, it equals 2.42 hectares.
[7] Pejorative term for indigenous people (Guisard, 1999)

> *so he tried to bring us up on the farm, teaching us to work in the fields,*
> *on the land [...] Raising children on the farm is much better than in the*
> *city."*

Since then, the RPs had understood farming as a means of living well. Land meant a place to live, have a family, raise children, and procure food for themselves, and also a potential business to grow. This helps establish the RPs' position and narratives towards looking for land and continuing with farming. They tend to position themselves as descendants of Europeans, and often feel ashamed of being related to indigenous peoples. From the RPs' position, the people of the south are people of European descent, therefore developed, while the peoples of northern Brazil and indigenous peoples are "lazy" and less developed. These racist expressions were strengthened with national developmental discourses, such as the "heroes of the nation" slogan (BBC Brasil, 2008). Thus, RPs repetitively expressed that they had brought development to the Amazon forest. They also identified themselves or their parents as brave people who left everything behind to enter the "untouched" forest, looking for a place to settle and develop.

8.6.2   The pioneers' first years: Forest becoming home and productive land

During the historical trend of construction of the BR-163 and colonisation, the Pioneer group (1979–1990), accompanied by their families, began the colonisation and developmental process of the region. Some RPs identified themselves as part of the "southern invasion". They were encouraged to come to the region mainly due to what they had heard about it, or they were brought.

> *I-18: "Then he* (his boss) *told my father: 'Let's go to Pará. Let's go on an*
> *adventure'. Then he took a 30-kilometre strip from the BR road, 10*
> *kilometres deep. Then my father came to look after it [...]."*

Of the 15 pioneer RPs, nine arrived as adults, while six arrived with their families as teens or children. The 15 pioneers shared their intentions to come to the region for reasons related to land appropriation and/or resource extraction (mining or logging). Some other reasons were associated with an agricultural production crisis in different regions. Furthermore, the majority expressed that their land was bought from another pioneer or the government. Most of them did not explicitly acknowledge clearing the forest; only three pioneers said they cleared the forest at the time of their arrival to obtain tenure. Also, the majority expressed that they were not the only inhabitants at that time, as many loggers and miners preceded

them, as well as the previously mentioned traditional and indigenous communities already existing in the region.

For the pioneers, the first years were an encounter with the region's "wilderness" and the lack of resources. Many express that the region was "only forest," referring to the non-existence of infrastructure and poor "developed" area.

> I-27: "[...] we came to Pará. We were children. At the time, BR163 was a new road that had only been built. And it was very difficult because we looked at one side, and it was just forest, and the other side was just forests."

They commented that as the BR-163 was not paved, access to primary resources was limited. *"Atoleiros"* (quagmires) formed due to heavy rain and silty forest soils, which prevented the ease of movement, and access was possible only by heavy trucks. Even though the pioneers told us about ways to survive in the region, they shared stories of how they constructed *"barracas"* (camping tents) and then, with time and resources, started building wooden houses.

> I-19: "We chopped down a few trees by the side of the road; there were no big trees, just small ones. With an axe, my father and I started chopping them down to make a shelter, and when he arrived (referring to his son), we made a little house out of coconut trees."

In addition, according to the RPs, there was no electricity, schooling, or health system. Pioneers talked to us about neighbours who had basic nursing training, which became the only health assistance in the region to help against one of the most common sicknesses, malaria. According to pioneers' stories, malaria was one of the deadliest sicknesses. In mild cases, attending the local nurse to ease the pain was the only remedy. They told us how nurses exchanged knowledge about treatments with the miners, who, in turn, had traded knowledge with the indigenous people of the region. In a serious malaria case, paying the miners (if possible) to take them to the hospital in the municipality of Sinop (~500km away) in their light aircraft was the only survival option. Many pioneers had lost someone to malaria; all of them reported having the sickness at some point.

> *I-11: "[...] and suddenly I caught malaria, and then it got bad [...] when I couldn't take it anymore, we had to sell some cattle we had there to take a plane to get out because the road here was terrible [...]."*

Another issue they talked about was wild animals. Snake bites and encounters with wild animals, such as pigs and jaguars, were common. On many occasions the pioneers mentioned the idea that the clearer the forest, the less dangerous it is, for them and for their early production.

> *I-19: "[...] We say we weren't afraid, but if we weren't afraid, we wouldn't climb the stick or run away from the (wild) animals [...]."*

Furthermore, they shared with us how, in the same manner, food was lacking. The growth of food resources for self-consumption took time. Many pioneers spoke to us about the lack of seeds and commonly used animal proteins in agricultural production (chicken, pork, and beef). During this time, the closest market was about ~450km away, in Itaituba or Mato Grosso, and according to the pioneers, it took 2 to 4 weeks to travel there, depending on the climate and season.

> *I-18: "[...] when we came here, it was all forest. There was no petrol station here or anything; we brought oil from Itaituba [...]."*

Therefore, the forest's resources, such as wild fruits, roots, and animals, were often harvested and hunted for consumption. Nevertheless, some producers shared the joy of these activities in the early times.

> *I-19: "[...] Yes, we were afraid (referring to wild animals) and didn't make it easy, but I thought it was very beautiful. We found it very enjoyable. We'd go fishing and catch the fish to eat right there. It was delicious."*

They told us how timber extraction and mining became two of the main activities in the region. They explained that the need to produce food filled them with vigour to introduce cattle breeding. The first local trading markets were between RPs, loggers and miners. All the pioneers interviewed became cattle breeders and designated an area of land for self-consumption agriculture.

> *I-24: "So everyone who lived here and produced something was focussed on selling it to miners[...] so you'll see the flow of people and movement is high, and people have to eat. That's what people from here used to get*

> *by on[...] It wasn't a form of subsistence; you made a good living out of it because sales in "garimpo[8]" are high."*

Moreover, the pioneers expressed that the government had tricked them into coming and abandoned them. This action – they said – led to a lack of law enforcement and dynamics of violence and dispossession. It made survival and defending the land from new arrivals and opportunists almost impossible. Nonetheless, many stayed because they said they had nothing left or nowhere else to go.

> *I-3: "The government opened up, and they were giving land to people from the south to come here, and then they abandoned all these people here with no medicine [...] They just brought the people and abandoned them."*

> *I-24: "He (interviewee's father) met someone who lived here, who tricked him into coming here, and that's how the story unfolded. Through knowledge to get past people, lies and always with the promise of a promising future, but in reality, they were just political lies."*

Over time, pioneers spoke about how these challenges strengthened the community ties, which helped establish *"comunidades"* (communities). RPs explained how communities were communal areas (only for land owners and families) where a church, a school, and a main hall were built. During the week, this was the first place where children could go to school, and on Sundays, this place was destined for praying and social and sports events.

> *I-1 "[...] but at the time, it was just forest, just forests… Yeah, we had to look for a school, a cemetery, creating a community was the way [...]."*

They shared with us that the communities strengthened the leadership in the region, which helped the inhabitants to have a sense of development. According to them, this became a vital space for socialising, dating, and partnership, not only to accompany and help each other but also to trade products and protect each other.

> *I-27: "Nobody dared to enter the community, nobody had the courage to invade [...]."*

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[8] Informal small-scale mining

During these years, pioneers positioned themselves as brave people who decided to come to the region and confront the "unsettled lands". However, they shared their fears and struggles. The forest was presented as a rich but undesirable area due to its dangers, while the land was essential to obtain. They brought about development while clearing the forest and creating communities. They also positioned themselves as victims, expressing that the government had abandoned them all these years. Nevertheless, the pioneers who survived sickness and violence at the end of this first period also created communities, extracted resources, cleared the forest, and opened up the land for livestock production. It evolved like the early stages of the agricultural frontier.

8.6.3   The second-generation: the sense of progress and development

During the historical trend of increasing external pressure, the regional arrivals never stopped; according to the pioneers and second-generation RPs, new people came to NP every day to work. Even though the pioneers and second-generation RPs talked about abandonment by the government, the RPs told us about a sense of development and productivity in the region. The narrative of better access to the region and having cleared land to work on brought many more people to the area.

> I-29: *"I came to Pará in 98 [...] my father's sister told me that Pará was the end of the world [...] When I realised this was the future, I sold my things there* (MT) *to come here."*

From 1991 to 2003, the second-generation group was taking over the region. Six of the 11 second-generation RPs arrived as adults, while five arrived with their pioneers' families as children or teens. More than half came from or were born in Mato Grosso; the others were born in Pará, São Paulo, and Paraná.

> I-26: *"We took a piece that belonged to another farmer, where a clearing had already been made, and grass seed had been thrown, but it hadn't been burnt. There was only this one edge of grass, but the bottom was still forest [...]."*

The second-generation RPs told us their intentions of coming to the region. The main answer was about obtaining land; one talked about extracting resources (mining). Furthermore, as cattle production grew, land prices went up. However, during this time, many people still had the option of arriving in the region to buy cleared land ready for production or clear their plots of land.

> *I-26: "So land is the way you grow. You work it, you survive thanks to it,
> and it has always been increasing in value [...] The owner of the plots said
> – No, 10,000 reais, that time has passed. We left because my mate couldn't
> afford it. So, we stopped the matter. Within 60 days, he sold it for 35,000
> reais."* (Talking about a transaction in the year 2000).

Additionally, some stories were shared about the creation of the first settlement in
the region. This allowed small farmers with fewer resources to obtain land. Five of
the second-generation RPs interviewed inhabit these settlements. The settlements
shared general issues in the region, such as the difficulty in linking with the main
road, as the new inhabitants hardly had a means of personal transportation.

> *I-2: "These plots were raffled off here by INCRA. A couple of years later,
> I became interested, and I bought this one and paid three thousand reais
> for it [...] When I arrived, it was just a forest. There was no road to get
> here; we'd go through the forest [...] There were the little trails that INCRA
> made, and then we would put our supplies like rice, beans and oil on our
> backs and walk through the trails."*

8.6.4   External pressure on internal interest

During this period, a crossroads of discourses began to converge upon the RPs.
The national discourses of "development," "order and progress," "Brazil, moving
forward," and "national heroes" came into conflict with national and international
discourses on sustainability, nature protection, and climate change. At this
juncture, NGOs appeared in the region to highlight environmental issues.
However, the region's deforestation, climate-change issues, and lack of
governmental support remained noticeable. The vast majority expressed their
discontent against NGOs and environmentalists, as they interpreted that since
their arrival, more obstacles have been put in the way of economic development
in the region. Since then, they have read in the media that the RPs are the cause of
deforestation and climate change. Some spoke about the non-existence of climate
change, as *"it rains well and the climate helps (production)"* (I-2). Apart from the
NGOs, the spread of national and international news about regional dynamics
brought discontent to the RPs. For pioneers and second-generation RPs, the
impression of development in the region had since then been in the hands of
foreigners rather than locals.

> *I-2: "Then the guys from abroad talk badly about it because they're environmentalists. Why don't they reforest their countries? They don't want to reforest, but putting obstacles in the way of Brazil is fine [...] that's a lot of politicking to me [...] These NGOs themselves [...] want money and keep putting obstacles in the way [...] they're holding up the country's development [...] Think of a guy who's angry with these NGOs, that's me – these disgusting people."*

The issue of deforestation and climate change was introduced to the region during these years, and until today, the RPs continue to take a stand against policies and discourses that hinder the region's development (for RPs, development equals productive land).

However, the external pressure they felt did not impede the development of the agricultural frontier. The RPs share stories of how land prices and markets evolved regardless of external pressure. These new dynamics included land transactions and speculation. As cattle and soybean production expanded in the Mato Grosso frontier, discussions were underway regarding the Sustainable Development Plan for the BR-163 highway, which included provisions for financing the paving of the road.

> *I-3: "Then they started doing daily work for each other, doing a little job here and a little job there, buying a head of cattle or two, and they began to get together, and they managed to buy a few fields and sell a few fields and buy a few more, and they started to increase slowly[...] In 2002, the last area my late father sold and bought a bigger one, sold for 800 reais an alquerie and bought for 700 reais an alqueire [...] it was 50km away from the city, and the other one he bought was 15km away; it was closer and better.*

During this time, and in their view, pioneers and second-generation RPs changed their positioning from being the victims without government support to being a strong community that was bringing development to NP. The forest was presented as challenging and undesirable while land prices increased.

8.6.5 The soy generation: land management and bureaucracy

By the mid-2000s, the discussion about BR-163 paving attracted more people with experience and capital to engage in soybean production to the region. The enhanced possibility of easier extraction and transporting of produce made this area increasingly desirable. However, national conservation and monitoring

policies were simultaneously implemented (PRODES and Deter), intensifying the crossroads between "development" and conservation discourses and further complicating the regional socio-environmental dynamics and RPs' perspectives.

With paving underway (2007), a new discourse arrived in the region, bringing the idea of making NP the new Sinop: *"This is how it will be. It'll be like Sinop"* (I-5). Located north of Mato Grosso state, Sinop is a municipality that, from the late 1980s and beginning of 1990s, became the so-called "capital of soy production" (The Economist, 2023). The high production of soy and corn led to the development of new infrastructure, including roads, schools, hospitals, and silos for storing grains. Therefore, the objective of the inhabitants of NP was to become an overcome Sinop. However, the process was not going to be simple.

> I-22: *"I arrived here; this urban area was all wooden houses. There was only the Bank of Brazil and the Bank of Amazonia, which were actual buildings [...] There was no asphalt, nothing; it was terrible. After a week, the drainage work began, and they asphalted the urban area. Within two years, I was already living in another town [...]."*

The twelve soy-generation RPs arrived from 2004 onwards. Furthermore, as explained above, between 2002 and 2004, there were many discussions on how to proceed with the BR-163 pavement. According to some RPs, the asphalting only started in 2007 due to political conflicts as the regional discourse shifted from focusing on the need for better infrastructure to fearing its consequences. This shift in perspective has been, and continues to be, alarming to many RPs. Improved infrastructure, while beneficial in many ways, also opened the door for more capital-intensive producers to enter the region. This influx of well-resourced competitors creates a scenario in which many local RPs are overrun and/or displaced.

> I-17: *"This BR-163 here, people fought not to have it paved. Why? For the big people to buy more cheap land, to buy more here/ because when a region is a mud road, the land is one price, when the asphalt comes, the price of the land doubles."*

Consequently, they said, bigger and more powerful farmers saw this as an opportunity. Hence, the soy-generation RPs interviewed came mainly for three reasons: to buy or rent land to produce soya, to work on cattle or soy farms, or to get a piece of land.

> I-23: *"When I came here* (2017) *and saw a place that was completely out of date [...] I saw that it's all small farmers, and I think it's a place that suddenly offers a good place for us to grow [...] I planted my crops in the past on rented land [...] Today I cultivate 1,400 alqueires."*

During these years, it was identified that some RPs entered the most productive phase since arrival. It helped them to diversify their income. They said NP became a place to settle and a corridor for people and commodities. Hence, more services were needed as new people arrived and drove through it daily. The urban area of NP became a place that contained more than houses, including convenience stores and markets, petrol stations, shops, and hotels.

> I-5: *"We bought a piece of land by the BR highway [...] Here, to raise cattle, it's better than Mato Grosso. It rains more [...] We bought the hotel a year and a bit ago. We're still working [...] We're getting on with life. We keep hoping to improve, to keep going, but I started from nothing in life and today, we don't depend on working as employees. It's not much, but we're surviving."*

Furthermore, according to some RPs, many political and legal dynamics impacted the region (e.g. projects such as PRODES, Deter and Terra Legal), and everything became more complicated. Interviewees said the new demarcation of federally protected areas brought many problems to the region. The demarcation of indigenous land and the creation of the Jamanxim reserve impede the procurement and production of those lands. Nevertheless, the region's programs that fund cattle production and land distribution arrived.

> I-26: *"I arrived here in 2004. I took 150 hectares of land to look after for three years. When the three years were up, the Jamanxim reserve was created (the land he took care of was established inside the newly created reserve)[...] INCRA demarcated the land and put us here* (referring to the Terra Nossa settlement). *We joined in 2007."*

RPs also stated that land regularisation programs, such as Terra Legal (2009), significantly impacted the region. They mentioned that the ineffectiveness of providing land titles also lowered the RPs' morale as land titles are one of the main elements used to request bank financing. In addition, forest monitoring through the Brazilian Institute for the Environment and Renewable Natural Resources (IBAMA) has also affected land regularisation and the production system. Many disagree with the monitoring programs, as they impose fines and embargos on
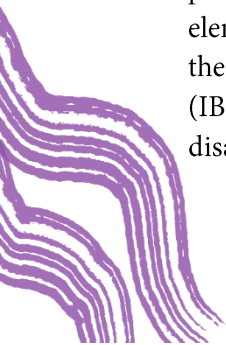
land but do not facilitate projects to conserve the forest or legalise productive activities. Most RPs, regardless of when they arrived, point out that bureaucracy (obtaining titles, obtaining CAR, LAR, releasing land from liens and fines, technical assistance, financing for production, among others) prevents the legalisation of land and work. Nevertheless, many don't lose hope in doing things the "right way".

> I-15: *"It's been 40 years, 42 years here, and I'm the only one with the land title. Then, the others are left without."*

> I-17: *"[...] due to the titles here, we don't get money from banks. Not even a bank finances us. Because of the environment, they don't finance. So, everything is our own resources; you have to buy from more expensive companies [...]."*

Currently, RPs living in urban areas have primary healthcare clinics, and some communities have small clinics. The municipal government has been actively funding water infrastructure projects and implementing healthcare, schooling and food programs. However, residents in settlements discussed persistent challenges. Individuals and goods are situated farther from the BR-163 and have ongoing mobility issues. Additionally, services like electricity and internet are not consistently stable in these areas. For instance, not all settlements have schools, so private or public transport is necessary for education. The same applies to access to health clinics, posing logistical challenges for residents in these remote settlements.

> I-25: *"We were happy because they brought me to the settlement [...] Now all that's missing is a road and technical assistance for the people to work because there's no point in just planting without technical support [...]."*

Furthermore, in 2018, Jair Bolsonaro won Brazil's presidency. Many blamed the Labour Party for past neglect of NP and strongly supported Bolsonaro. RPs' viewed Bolsonaro as a leader who finally recognised their needs and would promote regional development. These created a new attitude and discourse towards the federal government, as Bolsonaro was "the one who has seen them again" and procures for the region's economic development.

> I-16: *"There's no point in saying: 'I'm going to do everything legally' because you won't be able to. The bureaucratic laws; that's why people*

work illegally [...] But that's not a reason to lose hope [...] everything is a crime [...] And we understand that (Bolsonaro's) government wanted to encourage the people, but the laws hadn't been created yet. So, these bureaucratic things, from this past government (PT), which wants to come in again, which, if it does, will wipe out the rest."

8.6.6　Rural producers current overview

Regardless of all the challenges throughout history, almost all RPs talked about the changes and the new region's reality, as they observed the shift from being in "just the forest" towards agricultural land to soy monocultures, a paved BR-163, and many services. All mentioned the bureaucratic challenges that impede the development of economic and agricultural dynamics. They mainly position themselves against the previous government that "abandoned" them and in favour of the government that "supports" local structures.

Furthermore, very few RPs talked about the region being heavily deforested, or about climate-change topics. Consequently, in their view, the Bolsonaro government made a remarkable change in Amazonian policies by focussing on the aim to "develop" the region without any concerns about environmental issues.[9] Some RPs spoke about how the forest should be preserved by *"leaving it alone"*. However, many agreed that *"whatever is cleared should be used for production without bureaucratic or legal problems" I-8.* It was also found that only a few RPs talked about or noticed changes in rainfall patterns, an increase in climate temperature, or a decrease in the number of wild animals in the region. It was interpreted (by the authors) that the silence or lack of in-depth responses to our mentions about the forest from RPs might be a way to protect themselves from external pressure and discourses (e.g. that the media, researchers or NGOs might misrepresent their words or opinions) that address how the local socio-environmental dynamics impact the forest and global climate, mainly without knowing the local and personal contexts.

To summarise, many medium- and large-scale RPs, independent of the time of arrival to the region, position themselves as land- and forest owners. They built robust social and political structures, allowing them to navigate the regional

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[9] During and after the national election in October 2022 the large majority of the population of NP supported the Bolsonaro government, questioning the election result and protesting, partly violently, against the new government (Globo Noticias, 2022).

challenges. The smaller landowners position themselves as victims, as the settlements they are part of still lack many financial and technical-assistance resources. Nevertheless, the majority consider themselves part of the rural producers' "heroic" dynamic that continues to bring development to the Amazon forest. Thirty of the RPs said they like the region and like being RPs. Also, many said they would like to stay in the region. The vast majority spoke of how good they felt living close to the land and in the countryside. They said it gave them a lot of peace. Also, they commented that if it weren't for the problems in the region (e.g., infrastructure and bureaucracy), living there would be even nicer, and they would never have the intention to leave. Most look for their children to continue agricultural production or study something related. Therefore, they used a common expression to refer to how the dynamics in the region have changed – *hoje nós estamos no paraíso* (today, we are in paradise).

8.7 Conclusion

This article presented the connections between external discourses and the biographical narratives of RPs in NP, examining their influences on land dynamics while identifying and analysing national and external discourses within three distinct historical trends. The correlation of external and RPs narratives during the historical trends allowed us to display the particular discourses that impacted the decision-making regarding forest and land. Rural producers spoke from their biographical position about how these programs, political changes, and discourses affected their biography and decisions about land use and forest. This helps to demonstrate the heterogeneity of the local impacts based on internal and external discourses. Also, it exemplifies particular demands at the local level. We found that the RPs want to generate dynamics favouring agriculture, development, land regularisation, and productivity because that is how they perceive development should look. Therefore, the locals refuse the external discourses of forest conservation or climate change due to historically negative impacts on RPs' development, economy, and morale. This situation is because RPs have primarily aligned themselves with the development discourses of the region. Historically, they have often found themselves caught between local and external narratives of development and conservation. That means, on the individual level, that biography-driven life projects and future visions for the families of RPs

converge with developmental programs of the Brazilian government over decades as RPs perceive land as a production factor, while nature-conservation and climate-mitigation discourses contradict their idea of forest as an extractive resource and obstacle for their production system. This applies to all RPs independently, whether smallholder families or medium/large-scale farmers.[10] On a structural level, our case studies indicate that governmental programs tend to put landless and smallholder families in precarious settlement situations (second-generation RPs and/or poorly equipped settlement projects, etc.), while economically better-positioned RPs (third-generation RPs) not only have more economic resources but are also integrated into policy programs that privilege them even more. Consequently, regional inequalities may increase even further.

Knowing about the three generations' biographies helps us better understand their decision-making, which can promote a different way of creating policies aimed at RPs. For example, some pioneers and soy-generation RPs, who are large landowners, have a more robust physical infrastructure with which to grow their livestock or produce soybeans. On the other hand, second-generation RP and soybean farmers living in settlements (smallholders) lack specific structures; consequently, they are more vulnerable to regional economic and political changes and are, therefore, more inclined to sell their lands. The majority want to develop their agricultural production but fear that the rigid bureaucracy has confused legalisation and regularisation with criminalisation. These repercussions impact all RPs but disproportionately affect those with limited market competitiveness, potentially prompting them to sell their land. This, in turn, contributes to the concentration of land ownership in the hands of a few and the potential expansion of the agricultural frontier. From the RPs' narratives and understanding of their history, we argue that by implementing sustainable socio-environmental policies and dynamics, programs should create perspectives for RPs' families that integrate their life projects and future visions, bringing together contradictory aims of agricultural production and nature conservation, also keeping in mind that interests and needs of indigenous groups must be considered, by acknowledging their needs, strengths, rights and weaknesses.

Finally, it is crucial to recognise the need for more multidisciplinary research and local support structures to formulate policies that favour local socio-environmental dynamics. Physical structures, power relations between regional

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[10] It is important to mention that our research focussed on rural producers and their vision of land and forest. The imagination of indigenous people on land and forest may be completely different and even opposite to the producer's perspective.
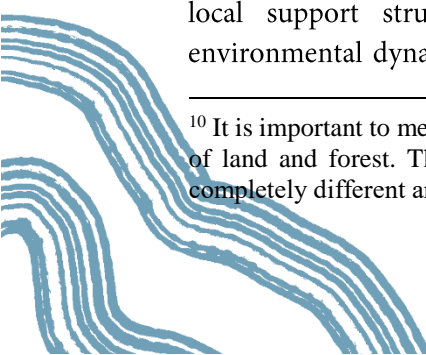
actors over socio-environmental dynamics, and decision-making patterns need to be considered for future research and development, providing information on the possible impacts of advancing agricultural frontiers or sustainable socio-environmental policies in NP and the Brazilian Amazon region.

In an era of urgent discourses that demand solutions for critical issues such as preserving the Amazon forest, we overlooked the essential practice of listening to the voices of those who engage in dialogue and share their daily lives with the forest. This article attempts to provide a different way of understanding local issues through the narratives of local people. It brings perspectives, heterogenising both structural and social circumstances and avoiding romanticising the narratives and discourses of stakeholders to allow the understanding and critical observation of local dynamics. It recognises the fights, struggles, and violent conflicts in this region. It shows a deeper comprehension of the PRs' standpoint elucidates the sources of some conflicts and contradictions, highlighting why the imposition of external policies invariably encounters resistance. In the current scenario, this approach, despite its inherent weaknesses, presents itself as a viable way forward. It serves as a starting point for exploring options to address local socio-environmental challenges and strives to have a significant impact, resonating from the local sphere to the international stage

SECTION III
Synthesis

9   Results Synopsis

The aim of this research is to contribute to the pluriverse in intersecting hybrid contexts. In order to do that, a zoom-in and discussion on Section II is needed. Before jumping directly into the entanglements of discussions and conclusions concerning the hybrid pluriverse contexts in the Brazilian Amazon, Pará and Novo Progresso, a results synopsis of Section II is presented.

Chapter 6 ([Pluriverse in science: discourses of Amazonian land-use change and socio-environmental (in)justice.](#)) presents an overview of the scholar's interactions and interlinkages with the Brazilian Amazon. Aiming to heterogenized particular dynamics in the Amazon, it focused on the search for pluriverse recognition in land-use change, socio-environmental dynamics and (un) justice topics. The chapter responds to the question: Do hierarchies in scientific knowledge production contribute to silencing subaltern voices and hiding a pluriverse approach when writing about Amazonia land issues? And if so, how? To achieve this, a literature review was conducted using three search engines. The results presented that:

a)   Certain states within the Brazilian Amazon are used as near-total representatives for the entire region, potentially oversimplifying the diverse realities across different areas.

b)   It found citation politics where European and Northwestern-affiliated authors are published in higher-ranking journals and cited more often than Brazilian-affiliated authors.

c)   The study found a disproportionate representation of stakeholders in the scientific literature about the Amazon. This imbalance in representation potentially silences subaltern voices and limits the pluriversal approach to addressing land issues in the region.
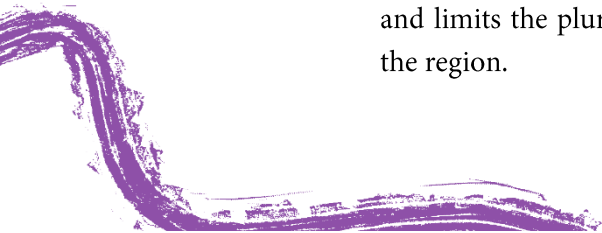
d) Also, it presents that even when pluriversal perspectives are considered in research articles, this does not always guarantee high sensitivity to the heterogeneity of local contexts or ensure that subaltern voices are adequately heard.

The study concludes that research methodologies must be developed to effectively capture and represent the diverse ontologies and epistemologies in Brazil's pluriversal landscape. Also, Brazilian researchers and policymakers face the challenge of integrating pluriversal, local perspectives with global scientific discourses and international policy frameworks. Finally, translating pluriversal insights into concrete policy measures remains challenging, particularly in a country with diverse regional realities like Brazil.

Acknowledging the pluriverse in the Brazilian context, particularly in Amazonian studies, offers a promising approach to addressing complex socio-environmental issues. It challenges researchers and policymakers to consider multiple ways of knowing and being, potentially leading to more inclusive and effective strategies for sustainable development and environmental justice. However, the full realization of this approach requires ongoing efforts to overcome representation biases and romanticisation and develop methodologies that can truly capture the diversity of Brazil's Amazon pluriversal reality.

Having the scientific discourse understanding of the region, Chapter 7 (The role of social and traditional media in the Amazon forest: in search of pluriversal discourses) makes a zoom-in on the most deforested state of the Amazon forest, Pará, to understand further the newspaper and social media discourses on agriculture and forest topics. This article aims to answer the following questions: What are the socio-environmental discourses about Pará's Amazon forest in social media and newspapers? How are they configured? And, which voices are heard and excluded? A collection of newspaper articles and tweets from social media X reviews were selected and critically analysed to achieve this. The results were:

a) The study found that while climate change, deforestation, and agricultural development are central topics, the media often fails to heterogenized the voices of local communities, indigenous peoples, and small producers directly intersecting with these topics and dynamics.

b) The analysis found that traditional and social media (X) predominantly replicate hegemonic discourses, often marginalizing voices such as small producers and Indigenous communities, resulting in a limited representation of diverse perspectives. Moreover, although it is a space open to debate, social media X might present complex usability, thus presenting a bias of the people who write in X.

c) Finally, it highlights two main discourses for the region: the conservation discourse and the contradicting production and development discourse. These discourses place those in power in a win-win situation while exerting significant pressure on local stakeholders, such as rural producers, indigenous and traditional populations.

The study underlines the importance of diversifying media discourses and narratives to include marginalised voices and perspectives, essential for a more equitable and comprehensive discourse on Amazon's socio-environmental issues. It also encourages assessments of traditional and social media from socio-environmental and pluriversal perspectives to understand the discursive structures and procure spaces for the voices not represented in media discourses.

As discoursive issues and structures were presented by the scientific and media discourses, the thesis zooms in once more into the Amazon to explore the municipality of Novo Progresso, to understand local narratives and search for intersecting hybrid pluriversal contexts in the region in Chapter 8 (Rural producers' discourses on the Brazilian Agricultural Frontier: between local and external narratives on land and forest). This study connects with the previous two as it aims to understand the dynamics of the Brazilian agricultural frontier while exploring the narratives of rural producers. It answers the question: How do rural producers' historical and present positioning and narratives shape land use and management on the agricultural frontier in Novo Progresso? The research incorporates the rural producers' narratives within the historical context of local, national and international discourses that contribute to land and forest-related socio-environmental dynamics. The results presented that:

a) The national and external discourses during the rural producers' historical trends impacted the decision-making on forest and land. This demonstrates the heterogeneity of the local impacts based on internal and external discourses.

b) Rural producers have shifted their position through history within national discourse as, first being the heroes, the abandoned, the powerful producers, and those who deforest, among many others.

c) Rural producer's visions intersect with national and international developmental and conservation discourses. This puts rural producers under constant pressure, affecting their decision-making and position.

d) Based on colonial and developmental discourses, rural producers want to generate dynamics favouring agriculture, development, land regularisation, and productivity, as in their vision, that is how development looks.

e) It also presents that within this pluriverse, there are conflicting visions and positions as structural governmental programs tend to put landless and smallholder families in precarious settlement situations. At the same time, economically better-positioned rural producers are also better integrated into support policy programs.

The outline of these results presents the complex landscape within the Brazilian Amazon. It presents the scientific, media and local understanding of the socio-environmental issues and, in some cases, the stakeholders' pluriversal vision, perception, position, interest, and beliefs of, about and within the Amazon region intersecting and presenting diverse visions.

The next chapter delves into the discussion of all these results, presenting the intersecting pluriversal hybrid contexts of the rural producers in the Brazilian Amazon region.

10 Discussion: The intersecting hybrid context within the pluriverse

Pluriverse are chaotic.
This is not America, (Residente, 2022)

Link Here

10.1 Intersecting hybrid context as part of the pluriverse

In the essential sense, the pluriverse, as presented in Chapter 3.2, consists of seeking and acknowledging different ways of seeing the world. For this, it is necessary to recognise that there are many different cosmovisions besides the one-world view. These many cosmovisions are exemplified by contexts such as the Andean campesines, the Zapatistas, the Afro-Colombian ways of living and embracing the world and, as presented in this thesis in Chapter 8, the narratives of rural producers. These groups and communities are presented as a proposal for a systematic change in seeing, feeling, knowing, and living the world. However, it is important to recognise that these many cosmovisions might intersect with the

one-world view and are part of all these socio-environmental dynamics, which also creates a pluriverse.

As presented in Chapter 8, the rural producers in Novo Progresso navigate daily between the one-world vision of production and development and their own form to perceive, see, love, embrace and live their land and forest. On the one hand, most of them love being producers, living in the forest and what the forest offers them. Some of these offers are linked to the regional dynamics of development and agricultural production, which are for local, national and international markets, placing them in a hybrid position between two or several worlds (i.e. many diverse distant cosmovisions and the one-world view).

This thesis proposes the term "intersecting hybrid contexts" in the pluriverse as the cohabitation between two or several worlds, which enhances the work presented by Escobar (2018), Nascimento (2023), Querejazu (2016), among others. Like pluriverses, the hybrid contexts are dynamic, chaotic and lack definition. However, it proposes that pluriverses are also found in intersecting hybrids worlds, which could align or misalign between the farthest and the closest worlds to the one-world view.

However, this needs to be kept in mind: being (somehow) part of the one-world view does not mean that we cannot learn from these communities or that it is not essential to listen to them and ignore them, which very often happens. Every world is complex, chaotic and full of contradictions, even in a pluriverse world, though, all ways of being contribute to the pluriverse. By focusing on these communities, my research aims to expand our understanding of the pluriverse beyond the traditional/modern binary, suggesting that it can exist in the interstices and hybridities of communities navigating multiple cultural influences. This approach challenges us to look for the pluriverse not only in spaces of obvious difference but also in contexts of apparent convergence, inviting us to consider how communities might maintain or create distinct "worlds" even as they engage with globalizing forces. This thesis closes this gap by acknowledging and discussing these other intersecting hybrid pluriversal worlds in Brazil (See Chapter 9).

10.2 Re-recognition of intersecting hybrid pluriversal contexts

A world within many worlds is what the Zapatistas proposed. However, are hybrid pluriversal context worlds welcomed in the pluriverse? This question has a practical and a theoretical implication.

As a theoretical implication, Hutchings (2019) refers to specific ethical Western frameworks' tendency to claim universality while reflecting specific cultural, historical, and epistemological contexts. This assumption of universality frequently ignores or neglects non-Western ethical ideas and behaviours, resulting in a standardization of ethical discourse that fails to account for other ways (Quijano, 2000). Hence, hegemonic discourses define the "right" and the "wrong" or the "good" and the "bad". In the Brazilian Amazon, these dichotomies fail to recognise the complexity of stakeholders' livelihoods (Neuburger, 2008). For instance, Procópio (2009) argues about "indigenous myth", where the dynamics and traditional ways of seeing the world from indigenous communities might be, in some cases, found ethically and morally distant from what the Western world-view, yet indigenous traditions and cultures (often) are used as both pluriversal and Western view examples in conservation and environmentally sustainable practices. The opposite happens to rural Novo Progresso producers, often framed as the "bad ones" because of historical socio-environmental dynamics (Chagas, 2024). Thus, discursively, they are not recognised as part of the pluriverse but as a gear in the one-world view operating system, which sometimes also marginalised them.

As a practical implication, Chapter 6 demonstrates that there is a disproportionate representation of stakeholders in scientific discussions. It also presents that even when pluriversal perspectives are considered, this does not guarantee sensitivity to the heterogeneity of local contexts; therefore, marginalised stakeholders' voices are not or less heard. In the scientific community, there is a lack of discussion on intersecting hybrid voices; thus, they are also excluded. In Chapter 7, the media discourses reproduced hegemonic discourses, which do not present a wide variety of stakeholders; however, they present some views on agricultural producers that might fit into the universal worldview. Moreover, both in scientific articles and in traditional and social media, additional efforts are needed to identify marginalised

voices within these discourses, even if other discourses are dominant. Thus, if, as a scientist, we re/produce and are users of scientific articles or media sources, we should look for marginalised voices in a sense of power-sensitive citation politics.

These theoretical and practical implications could mean - using the example of the rural produces in Novo Progresso - that the universal worldview sees and gives spaces to rural producers in hybrid contexts (maybe because of neoliberal economic interactions), but the pluriverse does not acknowledge them.

10.3 Intersecting hybrid contexts as marginalised groups (?)

Decolonial and postcolonial scholars have identified that marginalization and subalternity are complex (Amaya, 2013; Escobar, 2018). Although subalterns can speak, their voices are often silenced or distorted by the power structures that surround them (Spivak, 2004). As discussed in chapters 4 and 7, socio-environmental dynamics and everyday life contribute to discourse structure, and those in power are the ones who make these discourses hegemonic. It is this colonialist and power-relational characteristic that both gives voice and takes it away. Chapter 8 demonstrates how rural producers were historically voiceless and marginalised, but they position themselves in the discourse by generating a power reserve in the region. However, as Pajoni (2007) discussed, this chapter highlights the complexity of having or positioning a voice in the discourse. For instance, some producers are structurally and discursively marginalised within their community of rural producers in Novo Progresso. Smaller producers lack infrastructure and support and are relegated and often forced to sell their land to larger producers. These power relations exemplify the complex dynamics of thinking about which groups are vulnerable or more vulnerable within the same groups (a world within a world). Also, Chapter 8 lacks to present other stakeholders' diverse world views from Novo Progresso (e.g. garimpeiros, indigenous populations, etc.). These diverse world views might be different or even contrary to rural producers, and within these complex intersections, rural producers might not be marginalised at all.

As discourses are dynamic, sometimes heard voices become unheard, and other discourses take their place in the power dynamic, which might often depend on

the convenience of those in power. Chapter 7 demonstrates that when news bias reaches its peak due to hegemonic discourses, news and tweets give voice to specific issues and interest groups. Chapter 6 demonstrates how scientific discourses on climate change have increased since the democratisation of Brazil and the entry of non-governmental organizations (NGOs), which put pressure on and gave a voice to previously voiceless stakeholders (see Chapters 4 and 8). In addition, when discussing pluriverse and injustice in the Amazon forest and land relations, European and Northwestern affiliated scientists are more often cited, displaying the power relations in knowledge production, which sometimes also reproduce power relations by entering citation politics (see Chapter 6). This implies that even within a marginalised group, hierarchies may determine who is heard and who is not. (Carranza et al., 2023; Spivak, 2004). Thus, marginalization is extended to intersecting hybrid contexts, as these contexts also play a role in power relations.

10.4 Hybrid contexts' attachment to the one-world view

For decades, the discourses presented by Brazilian governments fostered a particular vision of and for rural producers. For instance, while presenting them as the nation's heroes for entering the Amazonian forest increased the myth of the rural producer (see Chapter 8). Since their arrival until the 1990s, rural producers were mostly confronted with discourses and public policies that promoted 'development' as intended by the hegemonic vision. With the arrival of environmental NGOs in the Brazilian Amazon, a strong wave of international and national discourses strongly impacted their land and forest decision-making. The wave of conservationist discourse obstructed them from achieving what they had been trying to do for two decades (e.g. infrastructural and agricultural development; see Chapter 8). Today, the pressure of the two hegemonic discourses (as presented in Chapters 6, 7, and 8), conservation, and production and development, have shaped rural producers' inherent perception and position.

Despite this, as discussed in Chapter 10.1, rural producers formed their own way of perceiving, living and existing in Novo Progresso, generating their hybrid context. Nonetheless, from the pluriversal perspective, some questions that arise

are: how can rural producers fit into the pluriversal frame and live a contradicting life in capitalist structures? The pluriverse often uses indigenous context, but what can other worlds learn from rural producers? Pluriverse for all species means much renunciation and surrender for the more privileged people. Would privileged communities renounce it? To answer these questions, it is necessary to understand the complex dynamics of the pluriverse approach, acknowledging the rural producers' intersecting (through history) hybrid contexts with other pluriverse in their community and region and the impact of developmental and colonial discourses. In trying to acknowledge all this, one has to accept that it is possible not to have a final and satisfactory answer (for all parties) to all questions.

This thesis contributes to pluriverse in intersecting hybrid contexts. However, this study recognises that due to the complex nature of pluriverses, different approaches are needed to further understand rural producers' intersecting hybrid contexts better and offer a different view of the world but one that still matches their way of perceiving and living in the world. Chapter 8 showed that rural producers often commented that they did not want more land but wanted to produce more. Also, they did not want to give up their land, but the lack of infrastructure or inability to compete in the market forced them to give up their land. Similarly, many wanted to live a quiet life in the countryside; however, as larger soy production companies arrived in Novo Progresso, they were forced to compete or extend the agricultural frontier by looking for more land in the interior of the Amazon rainforest. All these arguments highlight a deeply internalised colonial structural and discursive background, showcasing how complex this hybrid context's dynamics are and how its relations, discourses, and structures perpetuate the one-worldview in a certain way but procure their pluriverse in another. Revealing that, in the case of rural producers' hybrid context, even if they want to move away from the one-world view, colonial and developmental structures and discourses still place them further from the pluriversal vision.

This thesis suggests that the pluriverse should be understood not as a form of life and thought identifiable in certain populations but as a dimension, element, idea, or position that could emerge as an integral part of a (Western) form of life or thought. This means that the pluriversal dimension/idea infiltrates all spaces (hybrid contexts), spheres, people, and lives (and intersects) in a more or less

intense way, and as such, it challenges the idea of the totality of capitalism and the Western system (one-world view).

Therefore, studies such as this thesis contribute to establishing dialogues by suggesting that pluriverses exist in intersecting hybrid contexts, navigating between multiple cultural influences and the one-world view. Recognising that those perspectives and points of view are constantly developed and challenged by the interlinkages between theory and practice, this thesis can serve as a forum for dialogues and discussions within the pluriverse.

11 Concluding thoughts: reflections on the study

Pluriverses have gained great scope within discourses inside and outside the academy. It presents itself as an alternative for the coexistence of many worlds within a worlds. This pluriversal initiative proposes that by understanding the existence of a universal and hegemonic worldview, one must recognise that there are other diverse worlds that are being marginalised by the hegemonic and universal perspective.

So far, the intentions of the pluriverse are clear. However, many things remain open to conjecture, which have brought criticisms of the pluriverse. For example, the difficulty of the practical application of the pluriverse in collective and even global decision-making (e.g. climate change). Also, the extreme relativism which disputes the idea that all worlds fit into the same world. Moreover, the pluriverse can fall into romanticism while not presenting the entanglements of pluriversal thinking. This thesis also presents a further situation: the absence of inclusion of populations or groups that are not so distant from the universal modern worldview.

Therefore, this thesis aims to contribute to the pluriverse in "intersecting hybrid contexts". This novel term - "intersecting hybrid contexts"- proposed in this thesis entails the exploration and recognition of pluriverses that are also found in intersecting hybrid worlds, which could align or misalign between the farthest and the closest worlds to the one-world view.

This term stems from the study of pluriversal thinking and the knowledge and practical gap about such hybrid contexts and their intersection with other worlds and the one-world vision. To establish this, the thesis explores the Brazilian Amazon, a meeting place of entanglements and intersections of socio-

environmental dynamics and issues. The thesis first presents the scientific discourses from and about the Brazilian Amazon regarding forest and land; then, it zooms in on the state of Pará, where another discourse analysis of traditional and social media is presented. Finally, a last zoom-in was carried out in the municipality of Novo Progresso, where this thesis contributes to the pluriversal discussion of the intersecting hybrid contexts of the rural producers in the Brazilian Agricultural frontier.

What emerges from the results is an intricate relationship between local, national and global narratives and discourses about the Brazilian Amazon and the way of life, perceptions and positionings of rural producers in Novo Progresso. It shows that rural producers have gone through different colonial and developmental processes, dynamics and discourses, which have influenced their way of making decisions about the land and the forest. At the same time, they have developed a particular perception (their own world) based on the environment in which they live. These complex intersections have placed them in a binary position, on the one hand, of production and development and, on the other hand, of conservation of the space they inhabit, demonstrating that hybrid contexts are also highly complex and chaotic, like pluriverses. The thesis shows that this complexity is also presented in the context of the rural producers cohabiting under their vision and intersecting with other ways of seeing the world of other inhabitants of the same region. Worlds that may be very distant or even contrary to what the rural producers intend with their pluriverse.

The hybrid intersecting contexts – such as that of rural producers – are under-studied and under-represented pluriverses. This results in the exclusion of these hybrid pluriverses. For instance, pluriversal perspectives can marginalise rural producers pluriverse because it is believed to share a hegemonic world perspective.

The contribution of this thesis already marks an approach and a theoretical and practical contribution to the pluriverse. However, it should also be noted that this study has limitations and potential for improvement since it presents very specific scopes in its articles: in Chapter 6, the academic discourse presented a search using only mainstream search engines about dynamics in the Amazon; in Chapter 7, the analysis of discourses could also consider other traditional media and social networks; finally, Chapter 8 presents the narratives of rural producers; however, the thesis could be enhanced by the narratives of other stakeholders in the region.

Finally, this thesis is also intended to be a source of inspiration for people approaching the pluriversal world in order to develop further studies that include these contexts. As this will help to explore and reflect on the complex entanglements and intersections of the world where many worlds intersect, opening the topic and offering the opportunity to be forum for other voices.

SECTION IV
Appendix

12 Abbreviations

1. **(AG.KGGU or AG)** Research Group Critical Geographies of Global Inequalities

2. **(CAR)** Rural Environmental Cadastre

3. **(CNS)** Rubber Tappers Council

4. **(CLICCS)** Cluster of Excellence: Climate Climatic Change and Society

5. **(DETER)** Real-Time Deforestation Detection System

6. **(EU)** European Union

7. **(EZLN)** Zapatista Army of National Liberation

8. **(FENMUCARINAP)** Federación Nacional de Mujeres Campesinas Artesanas Indígenas Nativas y Asalariadas del Perú

9. **(FUNAI)** National Foundation for Indigenous Peoples

10. **(FSP or A Folha)** Folha de São Paulo

11. **(G7)** Group of 7

12. **(GCP)** Polycentric Climate Governance

13. **(IBAMA)** Brazilian Institute for the Environment and Renewable Natural Resources

14. **(IBGE)** Brazilian Institute of Geography and Statistics

15. **(INCRA)** National Institute for Colonisation and Agrarian Reform

16. **(INPE)** National Institute of Space Research

17. **(LAR)** Rural Environmental Licensing

18. **(MST)** Movimento dos Trabalhadores Rurais Sem Terra

19. **(MT)** Mato Grosso

20. **(NAFTA)** North American Free Trade Agreement

21. **(NGOs)** Non-Governmental Organisations

22. **(NP)** Novo Progresso

23. **(OL)** O Liberal

24. **(Pa)** Pará

25. **(PCN)** Black Communities Process

26. **(PES)** Payment for ecosystem services

27. **(PIN)** National Integration Program

28. **(PT)** Labour Party

29. **(RPs)** Rural producers

30. **(SDGs)** Sustainable Development Goals

31. **(SUDAM)** Amazon Superintendency of Development

32. **(USA)** United States of America

33. **(WoS)** Web of Sciences

13 Summary

The pluriversal thinking has gained attention in different areas of everyday life, between academics, activists, grassroots movements, indigenous and traditional communities, among many others. Pluriversal thinking comes from the cosmovision of Latin American groups and communities outside the academy, such as the Zapatistas, Andean *campesines* and Afro-Colombian groups. However, the term gained renown when Latin American academics from the global north brought it into discussion.

Pluriverses lack a definition. However, it focuses primarily on two things: (1) to challenge the homogenizing tendencies of coloniality and modernity, and (2) to advocate for a world where diverse realities and ways of knowing coexist and thrive. Pluriversalists identify that, historically, some groups have been oppressed by Western views, which has meant that their voice and recognition have been marginalised.

However, the pluriverse, which speaks of a World within many worlds, also presents certain criticisms. For instance, extreme relativism, the lack of dialogue and understanding between different cultural perspectives, creates barriers to effectively implementing the pluriverse. Also, the practicality of the pluriverse, which accompanies the extreme relativism idea, reflects on decision-making when agreements (from all pluriverse) should be taken on situations that affect the world (e.g. decisions regarding climate change). Romanticism, it has been pointed out that pluriverses can fall into the romanticisation of excluded groups, endangering the reproduction of dichotomies. Finally, this thesis points out the absence of inclusion of populations or groups not far from the universal modern world. This is the exploration of possible worlds within contexts growing closer to the universal or globalized world; this thesis names them "intersecting hybrid contexts." Despite not being considered 'traditional' nor 'indigenous' in the conventional sense, intersecting hybrid contexts may still embody distinct worldviews and practices, and at the same time, they have practices that perpetuate the single story of one world. These contexts, characterized by mixed cultural and ethnic heritage, occupy a unique position between traditional and modern and local and global. By focusing on these intersecting hybrid contexts,

the thesis expands the understanding of the pluriverse beyond the traditional/modern binary, suggesting that the pluriverse can exist in the interstices and hybridities of contexts navigating multiple cultural influences.

To explore the intersecting hybrid contexts, this thesis focuses on the Brazilian Amazon, a place of entanglements and intersections within discourses and social dynamics. The thesis comprises three studies: a) a systematic literature review on academic discourses regarding land, forest and socio-environmental (in)justices in the Brazilian Amazon; b) a discourse analysis on traditional and social media regarding forest and agriculture in the state of Pará; c) a biographical study of rural producers' narratives and intersection with colonial and developmental discourses in Novo Progresso, Pará.

The study found that the pluriversal dimension/idea infiltrates all spaces (hybrid contexts), spheres, people, and lives (and intersects) in a more or less intense way, and as such, it challenges the idea of the totality of capitalism and the Western system (one-world view).

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"And we will run, we will, we will crawl, we will"
(Rusted Root, 2009)
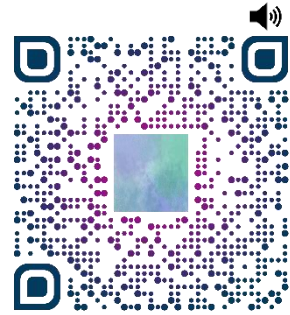
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This thesis results from dynamics and discourses learned and unlearned over the years. In addition, it is the consequence of intersections and entanglements with people who marked and shaped my process and, therefore, the process of this thesis.

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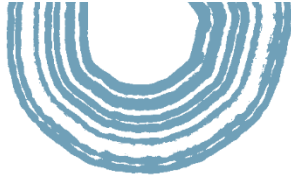
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16 Supplementary Material

16.1 List of articles analysed for Chapter 6

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16.2 List of newspaper articles for Chapter 7

O Liberal

20 August 2021	Por que manter o Cadastro Ambiental Rural
12 October 2020	Queimadas
21 March 2021	Pastagens crescem g 1,125 em 18 anos
21 March 2021	Faepa contesta os números do levantamen
14 JANUARY 2021	Mourão rebate
7TH FEBRUARY 2021	Bioeconomia desponta na capital do Pará
28 FEBRUARY 2021	Meio ambiente é a chave para a Europa
1ST MARCH 2021	Pará vai sediar
4 MARCH 2021	Belém recebe Fórum Mundial
4 APRIL 2021	AGRICULTURA familiar pierde
11 APRIL 2021	Desenvolvimento sustentável é estimulado
11 APRIL 2021	Negócio recebe investimento do Fundo Vale
25 April 2021	Produção sem uso de fogo é prioridade
27 APRIL 2021	Plataforma mapeia
30 APRIL 2021	Setor produtivo quer contribuir, diz direto
2ND MAY 2021	Economia colaborativa para o desenvolvimen
23 May 2021	Consumo de açaí ajuda a manter floresta em
6 June 2021	Amazônia tem know-how quando o tema é bioeco
1 July 2021	Programa entrega títulos de terras no Pará
12 September 2021	Fazendas de gado levam 38 milhões de hec
4 NOVEMBER 2020	Brasil pode sofrer
23 November 2020	Bolsonaro critica 'demagogia' ambiental
13 January 2021	Macron atribui desmatamento à produção de
14 January 2021	Declaração "mostra desconhecimento"
10 March 2021	Satélite brasileiro já está em operação
14 March 2021	BC abre consulta pública
18TH MARCH 2021	Pará tem maior
20 April 2021	MPF alerta para 'violações' na política ind
14 July 2021	Governo exclui Inpe de divulgação de dados
7th March 2021	O desmatamento e suas consequências
7 March 2021	SÃO FÉLIX DO XINGU LIDERA EMISSÕES
12 February 2021	Um preço bem salgado
6 December 2020	Monocultura e pasto produzem p p o fogo
3 September 2021	É possível produzir carne sem desmatar

5 June 2021	O Brasil precisa da economia verde
21 MARCH 2021	Amazônia agora contribui
6 June 2021	Potencial para liderar enfrenta desafios bio
2 April 2021	Política fundiária estimula derrubada da flo
11 APRIL 2021	Parcerias ajudam a enfrentar
25 APRIL 2021	Sistemas agroflorestais
18 APRIL 2021	Agroextrativismo e um cheiro de futuro
10 December 2020	Evento põe Amazônia em destaque
11 December 2020	Mourão participa de reunião técnica em B
3 June 2021	Governador fala sobre fake news em evento
23 April 2021	Setor produtivo concorda com p a meta fixad
3 June 2021	Bioeconomia amazônica é discutida em webinar
22 April 2021	Senadores pedem garantia de crédito rural à
1 June 2021	Bolsonaro defende investimentos na Amazônia
3 June 2021	Serviços ambientais sem impostos
9 July 2021	Via Brasil vence leilão da rodovia fundament
Folha de São Paulo	
05 June 2021	Pressionado, Bolsonaro diz que Brasil tem orgulho
16 May 2021	Sob a pata do boi
02 October 2020	Ruína Amazonica
29 March 2021	Alessandra Korap
17 February 2021	Mato Grosso transforma seu destino movido por China
05 January 2021	Carca de 0,4 da área do Pantanal mato grossense quei
10 October 2020	Para ministra da Agricultura, boi bombeiro evitari
13 November 2020	Estudo apota indicios de grilagem ao redor da Br-163
06 November 2020	Mourao nega responsabilidade do governo Bolsnaro sob
03 November 2020	Brasil iria de pária a bode expiaório do clima com v
16 December 2020	Combate ao aquecimiento é prioridade global
16 December 2020	Solucoes passam por acoes de Mercado e visao Sistemi
16 December 2020	Agricultura assume protagonismo frente ao aquecimien
27-04-2021	Debate ambiental sobre Ferrorgrao é cortina de fumaca

13 June 2021	Biodiversidade amazônica pode ser celeiro Blobal, di
17 July 2021	Clima de urgência
11 August 2021	Crise do clima gera prejuízo no campo, com morte de
10 September 2021	Por uma floresta em pé
26 June 2021	Novo ministro do Meio Ambiente cancela primeira reun
15 June 2021	Diversidade sociocultural da Amazônia é essencial pa
04 June 2021	Substituir a Amazônia por grandes plantações comerci
11 August 2021	COP-26 é a última chance de mantermos o 1,5ºC vivo
25 June 2021	Após era Salles, fundos esperam compromisso contra d
30 August 2021	Marco temporal para terra indígena deve unir Planalt
10 September 2021	Taxas de queimadas no cerrado são as piores desde 20

16.3 Biographical guiding questions for Chapter 8

Estamos aqui sentados com... você concorda que gravamos esta entrevista e usamos as informações de forma anônima exclusivamente para fins de pesquisa? Comprometemo-nos a não utilizar os dados para qualquer outra finalidade e a eliminar a gravação após a conclusão da pesquisa.

	Pergunta	Apli. pra	Detalhes sobre...
Migração	Você poderia me contar mais sobre a história de como você chegou aqui?	Todos	• Onde você nasceu? / De onde você vem? (Ano de nascimento) • Você veio diretamente para cá? • O que você estava fazendo antes? • Você tinha terra? • O que você estava fazendo com a terra?
Propriedade da terra	Qual é a sua história sobre a propriedade da terra?	Todos	• Como você se tornou um proprietário de terras? / Quando você chegou? (Ano) • Como era a propriedade quando você chegou? • Como era a floresta quando você chegou à sua propriedade? • Você tem um título de propriedade oficial da terra? • Você tem CAR?
Assenta mento	Você pode nos dizer mais sobre o estado anterior e atual do assentamento?	Assent.	• Como estava o assentamento quando você chegou? • Como está agora?
Produção	O que você produz?	Gado	• Quantas vacas? • Cria (leite/carne), engorda, leite
		Labora	• Que culturas você produz?
		Todos	• Tamanho do terreno, área de produção, floresta • Qual era seu propósito de produção quando você chegou?
Renda	O que você consome, o que você vende?	Todos	
	Você tem fontes de renda adicionais?	Todos	

Administração	Como você maneja seu pasto?	Gado	• Rotação (tipo de rotação) • Insumos: calagem, fertilizantes, irrigação, pesticidas • Replantio • Queima
	Como você produz suas culturas?	Labora (soja / milho)	• Planta / datas de safra • Cultivo duplo • Rotação (tipo de rotação) • Insumos: calagem, fertilizantes, irrigação, pesticidas • Tratamento do solo
Problemas e apoio	Você enfrenta algum problema em torno de sua produção?	Todos	• Problemas relacionados ao clima; se afirmativo, como você planeja se adaptar; obstáculos da adaptação
	Você recebe alguma ajuda?	Todos	• Vocês contratam trabalhadores? • Vocês recebem ajuda de fora? • EMATER, governo, sindicato dos agricultores
Interações	Você tem alguma interconexão com outras pessoas, instituições, grupos na região?	Todos	
Perspectivas futuras	Quais são seus planos e metas para os próximos 5 a 15 anos?	Todos	• Você gostaria de permanecer na região? • Você gostaria de permanecer com a terra / produção? • O que você quer produzir no futuro? • Qual você pensa que será o futuro de seus filhos?
	Você planeja intensificar sua produção?	Gado	• Integração com a produção agrícola • Integração com a silvicultura (por exemplo, árvores leguminosas cercadas) • Insumos: fertilizante, calagem, irrigação • Replantio • Alimentação suplementar
		Labora (soja / milho)	• Cultivo duplo • Plantação e colheita integrada • Integração com o gado • Integração com a silvicultura

			• "Sob a mudança climática, espera-se que o aumento das temperaturas e a redução da precipitação levem a uma redução no rendimento do milho nesta região em cerca de 28%. Como você se adaptaria a isso? Vocês investiriam em um sistema de irrigação"?
	Que obstáculos você vê para a intensificação?	Todos	
	Você planeja expandir sua produção?	Todos	• Para quais áreas?
	Como você acha que será esta região daqui a 15 anos?	Todos	• Como você imagina a floresta no futuro?
Identidade	Você gosta de ser produtor rural?	Todos	
	Você gosta de morar aqui (na área rural)?	Todos	
Percepção da Floresta	Qual é a sua relação com a floresta?	Todos	• Você considera que você vive dentro ou perto da floresta? • Você visita a floresta? • A floresta é importante para você? Por quê? • Você já ouviu / conhece alguma história sobre a floresta ou o que aconteceu na floresta?
Outros	Informações quantitativas	Todos	• - Idade • - Ano de chegada • - Experiência agrícola • - Tamanho da fazenda • - Tamanho do rebanho • - Registro CAR • - Produtos • - Mão-de-obra (família / vizinhos / contratados)

Para mis papás.