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Transforming Universities
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**Territorial Governance
Collectives: Instrument of
Formation, Production of
Knowledge and Intervention
for the Realization of Climate
Justice in the Amazon**

**Transforming Universities for a
Changing Climate
Working Paper Series No. 16**

**By Salomão Antônio Mufarrej Hage, Edir
Augusto Dias Pereira, Oscar Ferreira
Barros, Marcos Vinícius Costa Lima,
Waldirene dos Santos Castro, Guiomar
Corrêa Tavares, Celso Alexandre de
Araújo Ribeiro, and Maria de Nazaré
Cunha de Araújo**

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Salomão Antônio Mufarrej Hage
Edir Augusto Dias Pereira
Oscar Ferreira Barros
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Waldirene dos Santos Castro
Guiomar Corrêa Tavares
Celso Alexandre de Araújo Ribeiro
Maria de Nazaré Cunha de Araújo

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Abstract

This working paper presents the findings of the study developed by the Climate-U Network of the Federal University of Pará, with the objective of creating the Territorial Governance Collective (COGTER) of the Tocantins River region of the Amazon. The Collective was formed by leaders of social movements of riverside, *quilombola* and peasant populations in municipalities from Cametá, Baião, Mocajuba, Oeiras do Pará, Limoeiro do Ajurú and Igarapé Miri; and teachers, students and graduates of the Rural Education, Agronomy, Geography and Pedagogy courses at the Tocantins University Campus of UFPA. It aimed to empower them to defend their territories, and build collective strategies to face environmental impacts and climate change; and demand sustainable measures from companies operating in their territories. The study was developed through participatory action research, which fostered dialogue between the researchers' academic knowledge and the traditional knowledge of the communities involved; with the use of *alternation pedagogy*, which made it possible to carry out coordination between the educating of subjects, the production of knowledge and collective intervention, with specific periods that alternate in carrying out activities within the university, called *school time*; and collective actions in the communities and territories where participants live, work and develop their community practices, called *community time*.



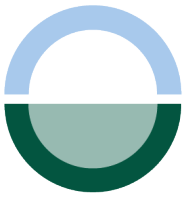


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Introduction

The Amazon has complexity and diversity as identity marks of its territories and territorialities, which are expressed in the environmental, productive and socio-cultural aspects that affect the reproduction of innumerable forms of life it harbors; in the coexistence between the peoples/ethnicities/nationalities/groups/social classes that live there; with their feeling-thoughts (Quinteiro Weir, 2019) that combine different ways of existing, built with their educational processes that affirm belonging to this immense territory.

In the current scenario, the Amazon with all its biological and sociocultural riches, and the planet we live on, are threatened in their existence by a historical system of death, environmental destruction and climate change, illness and multiple oppression: capitalist, patriarchal, racist, anthropocentric, urbancentric and colonial, which understand the Amazon as a simple frontier of expansion, putting at risk all forms of life, human and non-human that it shelters and all those who defend them. The effects of this system have worsened, as social inequalities intensify, especially in these times of the Covid-19 pandemic.

This system has assumed a certain development model that focuses on economic growth and the extraction of rubber, wood, oil, agribusiness, large hydroelectric plants and mega-mining, advancing with the appropriation of the territories of indigenous peoples, *quilombolas*¹ and extractivists, plundering all elements that constitute the richness of the biome, to generate profits. This has recently become known as the “commodity consensus” (Svampa, 2015).

Social inequalities, structural violence, the current climate crisis and its civilizational threat are consequences of this development model, linked to the modern-colonial “matrix” of power (Quijano 2005; Mignolo, 2010), which is leading the Amazonian ecosystem to the point of no return, threatening the irreparable loss of the most important rainforest on the planet, home to more than 50 million people, along with a good part of the planet's biodiversity. If we do not stop this trend now, it will be the death of the Pan-Amazonic region, which is vital to stopping global warming and guaranteeing life on the planet.

In the understanding of Malheiros, Michelotti and Porto-Gonçalves (2021), the predatory action of capitalism, which is constitutive of capitalism itself, with its coloniality, managed to build a social representation of the Amazon as an *indomitable nature*, which needs to be dominated and not cared for; or as a *backwards*

¹ Expression used for people who live in collective territories called quilombos, who have ties of solidarity and an ancestral collective memory, descendants of Black Africans brought to Brazil as slaves, but who, with freedom, continue to produce their existence in a cooperative way, mostly in rural territories in Brazil.

demographic void, which needs to be developed, or more precisely, “de-developed”, so that its involvement is broken so that it “opens up” to the world, incorporating the standards of progress and modernity; since, “de-developing”, in this context, means taking away those who are from the place the power to decide their destiny, because the development will have to come from outside, from some external civilizing agent, since their populations do not show themselves capable of leaving the state of nature and/or backwardness; or even it is propagated the vision of the region as *untouched nature* that must be preserved, in a perspective of sanctifying the Amazon, as a sanctuary that must not be desecrated. The Amazon has also been seen as a *region of the future* that, because it is a promise, has no present; and the future, in this sense, presents itself as a threat, for updating the coloniality that has always marked the territory.

This reality puts us in front of a double responsibility, according to these same authors: to build evident forms of understanding about the processes of capitalist expansion in the Amazon and the sieges to the territories of life, which have worsened with the pandemic of Coronavirus; and dialogue with the vast collection of knowledge – millenary heritage of Amazonian peoples – that are experienced by hundreds of indigenous ethnic groups and multiple traditional peoples and communities, who built diverse Amazonities and Peasantities in intercultural dialogue with other matrices of rationality, and live in the forest and its rivers, as well as in Amazonian urban outskirts, where there are multiple economic and social circuits, fundamental to food autonomy and always marginalized by hegemonic market systems.

Seeking to assume the responsibility that falls to us, the research team from the Federal University of Pará (UFPA), that is part of the Climate-U Network - Transforming Universities for a Changing Climate, under the leadership of University College London (UCL), has been developing since 2019 a participatory action research (PAR) project to respond to demands related to environmental sustainability and climate justice. This project is committed to articulating the formation of Collectives of Territorial Governance – COGTER – in different territories of the State of Pará, selected for being areas of conflicts and critical environmental and climate impacts, as well as the presence of local communities interested in preserving the environment and asserting climate justice, many of which are already engaged in this cause.

In this study, the creation of the COGTERs made it possible for leaders of local communities to gather, engage them in dialogue with each other and with university professors and students, with the intention of empowering them to defend their communities and territories, with the construction of collective strategies capable of facing the environmental impacts and changing climate that afflicts them; and demand measures of a sustainable nature from the undertakings that already exist in their territories and from the public authorities.

In the process of creating the COGTERs, we primarily sought to involve leaders of social movements from indigenous communities and territories, quilombolas, riverside communities

and peasants; people who live from their work and produce their existence through family farming, artisanal fishing and the gathering, management or extraction of forest products, ensuring the sustainability of life and the preservation of nature with their traditional knowledge and technologies built and accumulated from generation to generation (Diegues, 2009; Little, 2002). We also sought to involve students, professors and university graduates; and representatives of political and governmental management bodies, and market and solidary undertakings, whether state, community-based or private, that interact with these territories.

Our aim with this study is that the COGTERs become spaces for the collective production of knowledge and effective intervention strategies in combating the ongoing environmental impacts and climate changes in these territories, which destroy the biomes and expel the original, traditional and peasant peoples from their communities with deforestation, the destruction of water sources, the proliferation of gold mining in rivers, and the intensive use of pesticides.

These environmental impacts have modified the local landscape with the substitution of the forest for pasture or the production of monocultures, the implementation of dams or large undertakings linked to mining, such as waterways, railways and pipelines. They act in conjunction with climate change, resulting in an increase in global temperature, ecological imbalance and the extinction of many species that constitute our biodiversity.

The Amazonian territories have suffered constant threats due to the implementation of large governmental and private projects that require an analysis of their impacts on nature and society and a review of methods for exploiting natural resources, whether through agro/hydro/mineral business (Malheiros; Michelotti; Porto-Gonçalves, 2021), due to the existence of accumulation of land or due to the neglect and absence of public policies that make governments and companies responsible for ensuring the right of indigenous peoples, traditional peoples, quilombolas and peasants to remain in their territories and affirm their cultures and territories.

The breadth of environmental and climate problems experienced by communities and traditional peoples of the Amazon and the scope of influence of the Federal University of Pará (UFPA) with these problems, motivated us to take the decision to carry out our PAR with the perspective of creating two Collectives of Territorial Governance, namely:

1. COGTER of the Tocantine Amazon

This COGTER includes the municipalities of Cametá, Baião, Mocajuba, Oeiras do Pará, Limoeiro do Ajurú and Igarapé Miri, all located in the northeast of the state of Pará, close to the south of the Tocantins River and victims of environmental impacts such as: pollution by pesticides, deforestation on the banks and silting



up of rivers, in addition to environmental impacts caused by the Tucuruí Hydroelectric Power Plant.

It involves leaders of riverside and quilombola social movements from communities located on the banks of the Tocantins River and on the banks of the Oeiras River, and teachers, students and graduates of Rural Education, Agronomy, Geography and Pedagogy Courses on the University Campus of Tocantins at UFPA (Figure 1). Appendix 1 presents the team of researchers who are part of the COGTER of the Tocantina Amazon by municipality, identifying the entity, association or union in which it participates.

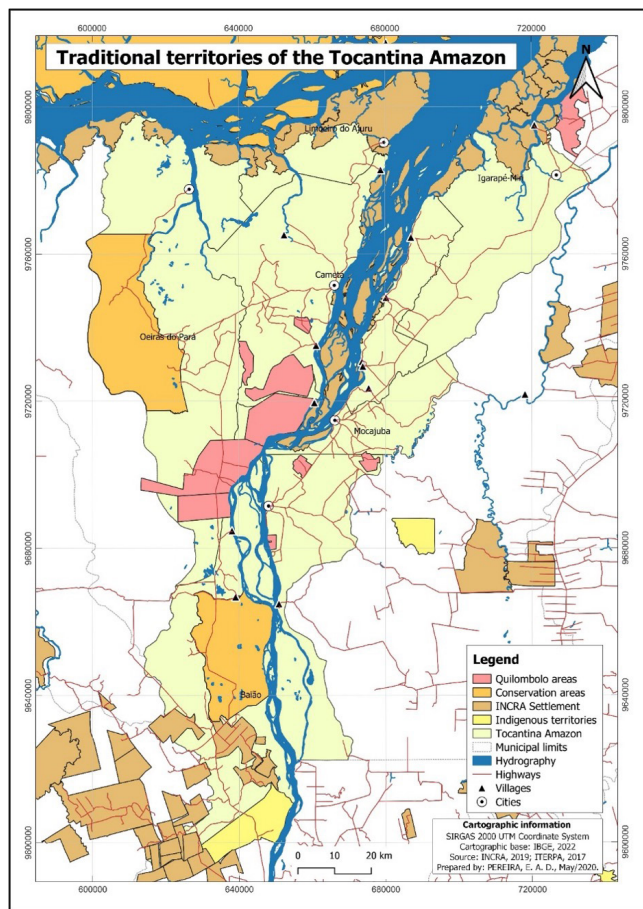


Figure 1. Diversity and socio-environmental vulnerability of territories of traditional populations in the Tocantina Amazon in Pará. On the map, indigenous land, quilombola territory, riverside (INCRA settlements), extractivists (Conservation Unit) and riverside cities and towns are highlighted (Source: COGTER of the Tocantina Amazon, 2022).

The PAR focus is building a broad collaborative network between the university, community organizations and social movements from local communities to face the environmental and climate impacts that affect their territories.

Throughout the study, numerous actions were carried out for the construction of the COGTER in the Tocantins Amazon, including training, research, and socio-environmental intervention activities, bringing together professors and students from the university with

leaders of community organizations and social movements from local communities.

In total, we had four significant moments in this process, with two held at the Rural Family House (Casa Familiar Rural-CFR) and two at the Tocantins University Campus (Campus Universitário do Tocantins-CUNTINS) in Cametá, accumulating experiences, knowledge, practices, and propositions built with the representations of quilombola communities, unions, associations, riverside dwellers, family farmers, and extractivists regarding the role of the university in climate change in the Lower Tocantins region.

The first moment took place on November 26th and 27th, 2021, at the Rural Family House (Casa Familiar Rural-CFR), with the participation of 35 researchers from the municipalities involved in the study (Cametá, Baião, Oeiras do Pará, Mocajuba, Limoeiro do Ajuru, and Igarapé-Miri). During this meeting, there was a presentation and discussion of the Climate-U Project and the implementation of participatory action research, as well as the study and problematization of a recorded lecture by Prof. Valério Gomes from INEAF/UFPA on climate change on the planet and its impacts, environmental imbalances, and ecological and socio-cultural disconfigurations in the Amazon. Subsequently, there was a planning session to be developed in the community of researchers, in their municipalities, based on the basic guidelines for the "Participatory Diagnosis of Climate Change and Socio-Environmental Conditions in the Lower Tocantins Territory."

The second moment took place on March 18th and 19th, 2022, also at the Rural Family House (Casa Familiar Rural-CFR), with the participation of 28 researchers. Initially, there was an exposition of the participatory action research activities in the communities where the COGTER researchers reside, a moment called "Sharing of Community Time." The initial research identified a critical set of situations, including the destruction of riparian forests, river siltation, vertical erosion on riverbanks, the creation of waterways through subaquatic rock explosions and river channel openings, açai monoculture, and carbon credits, as presented in the following testimonies.

Rosaly, one of the researchers involved with the COGTER, who lives in the community of Calados, in the municipality of Baião, shares in her report how the waterway will affect life, fishing and agriculture in her own community:

"Our community is located by the Tocantins River, right in the path of the waterway, along with the Cardoso community, where there was a defense movement and a mass mobilisation, and we will be directly affected by this project. The people who gave us the interviews are farmers and fishermen, and with the waterway, our lives will be affected, our rivers, fishing, and agriculture."

(Rosaly - Calados/Baião)

Josafá, another researcher involved in participatory action research who lives in the municipality of Oeiras do Pará, explains, based on the survey carried out, how the environmental impacts

have caused an imbalance in the community:

“Here in the community where the participatory research took place in Oeiras, they reported that many factors are affecting their lives. Brazil nut trees are being eliminated, the source of the stream is drying up, and the absence of riparian forests and islands is causing imbalance in the communities.”

(Josafá - Oeiras do Pará)

Bianca, a COGTER researcher from the municipality of Limoeiro do Ajuru, explains the consequences of açai monoculture affecting the communities of Paquetá and Valtinha:

“In the participatory research in the community of Paquetá and Valtinha, we have observed that the island and its edges are collapsing due to accelerated erosion, affecting the houses. We have noticed a decrease in flora, especially riparian forests, due to açai monoculture. The representatives we interviewed and spoke to told us that they have not grown any other crops for over 20 years, clearing the area and removing fruit-bearing species, focusing solely on açai production.”

(Bianca - Limoeiro do Ajuru)

Edir, PAR coordinator in the Tocantina Amazon, explains how local fishermen lost control over the movement of water, in the municipality of Mocajuba, with the implementation of the Tucuruí Hydroelectric Power Plant and how this affects their daily lives:

“Beyond Mocajuba, where the daily tide variation is different, we don’t experience what they suffer. They face droughts and annual dry spells because there has been a profound alteration of the riverbed due to siltation, with beaches and sandbanks. When the water from the hydroelectric dam rises above the water level measured at 74, the gates are opened all at once, causing the waters to flood the banks and streams overnight. So the fishermen have lost control over the rhythm of the water, tides, ebb, flow, and tides. They can no longer maintain the classification they had regarding the tides because there is an artificial control of the water carried out by the hydroelectric dam.”

(Prof. Edir - UFPA)

At this moment, we had the participation of Prof. Dr. Guilherme Carvalho from FASE, who contributed by conducting a workshop on the topic “Global Climate Change and Carbon Credit in the Amazon,” and we continued the training of researchers with the development of an Intervention Plan to be implemented in their communities.

The 3rd moment took place on June 29th and 30th, 2022, at Cameté’s CFR and featured the participation of Tiffany Higgins, an American journalist and PhD candidate from UNIFESSPA, who learned about the activities of the Climate-U Research in Brazil/Amazon and conducted interviews with researchers and recorded audiovisual footage of the meeting. During this phase of the participatory research, we conducted a workshop on “Systematization of Experiences” aimed at improving social

techniques and investigative procedures in participatory research with social movements, as well as enhancing the capacity to systematize the experiences being developed by researchers in quilombola communities, riverside communities, extractivist communities, and fishing villages.

During this meeting, we also held a workshop on building a Conceptual Map, focusing on three themes: **Climate Justice**, **Hydroclimate**, and **Climate Vulnerability**. On the second day (June 30th), there was a sharing of the participatory research conducted in the communities, allowing us to observe the breadth and growth of the researchers’ actions, led by the collective of researchers that make up the COGTER of the Tocantine Amazon in the municipalities involved in the PAR. All these actions were developed through dialogue and popular participation within the communities and territories, implemented in harmony with nature rather than against it.

a) Resumption of the “Ecologic Reserve Rio Imim” Project in Baião, a project that involves the participation of seven communities in the quilombola territory and focuses on the reactivation of the environmental preservation area on the River Imim and its tributaries, in the community of Cardoso, through community fishing agreement, area under impact of river dredging to be carried out by the Araguaia-Tocantins Waterway Project (Figure 2).

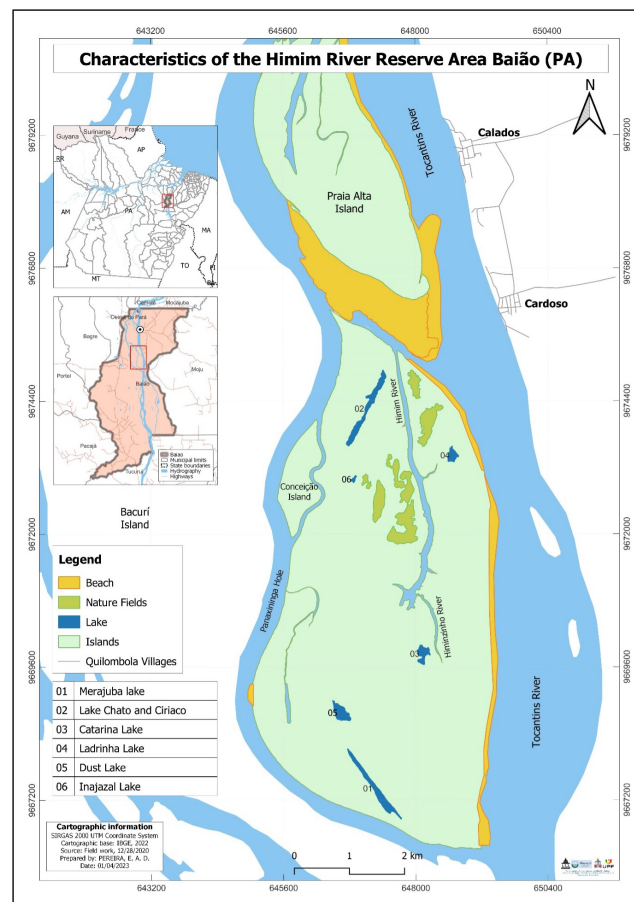


Figure 2: Fish nursery community reserve area on Bacuruí Island in the municipality of Baião, based on the use of fishermen



from riverside quilombola territories such as Calados, Cardoso, Vila Dutra, Santo Antônio and Santa Fé (Source: COGTER of the Tocantine Amazon, 2023).

b) Creation of the Project “Forests around the rivers, erosion reduction and monitoring of climate changes in the riverside communities of Cametá”, which is being developed in the communities of Guajará and Porto Grande in Cametá, and enabled the creation of the “Environmental Booklet” that addresses the environmental impacts and their causes, reforestation and a proposal to build fish ponds.

c) Project “Reforestation of areas impacted by the advance of monoculture of the açai in the community of Cardoso” in Limeiro do Ajuru, with the development of community agroforestry strategies to minimize the accelerated impacts of the expansion of the açai plantation, and to promote the awareness of communities about the importance of preserving native vegetation along with the production of açai.

d) Workshops that approach and record the situations of silting up of rivers, deforestation for expansion of açai monoculture, violence in the forest, the presence of garbage in the river, in the soil and the decrease of shrimp fish in the Nossa Senhora de Nazaré Community in the municipality of Oeiras do Pará.

e) The “Environmental Education and Waste Reuse in Riverside Communities of Mocajuba” project, developed with the aim of promoting collective awareness about the proper disposal and reuse of waste in riverside communities, in particular São Joaquim, located in Settlement Project (PA) on Ilha Grande Conceição (Figure 3).

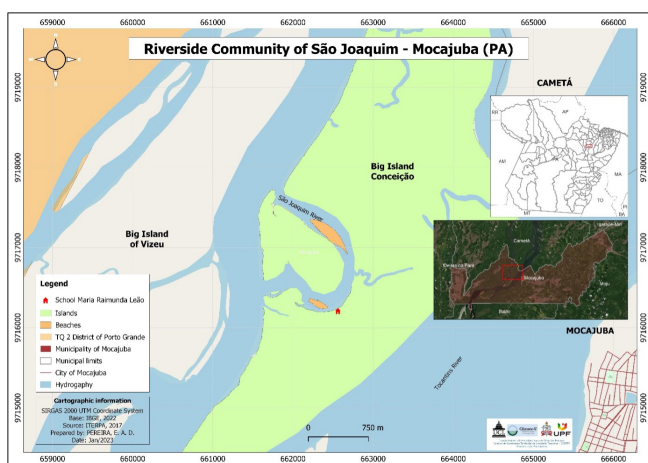


Figure 3: Islands located next to the city of Mocajuba are inhabited by several riverside communities that work with fishing, cocoa cultivation and açai management in areas already recognized as Settlement Projects (PA) by INCRA (Source: COGTER of the Tocantine Amazon, 2023).

f) The project “Discussion Groups on the importance of the forests around the river in the community and listening to residents about the impacts of the devastation of these forests”,

in the riverside community of Morutipocu, in the municipality of Igarapé Miri and Furo do Seco (Figure 4).



Figure 4: Erosion caused due to the removal of riparian forest to expand the açai plantations in the riverside locality of Furo do Seco in Igarapé-Miri (Source: COGTER, 2022).

The 4th meeting took place at the University Campus of Tocantins/UFPA/Cametá on January 26th, 27th, and 28th, 2023, representing the convergence of participatory action research activities and their articulation with other universities and institutions. An institutional meeting was held between representatives from UFPA, UEPA, and IFPA to discuss the expansion of participatory action research into other institutions and seek partnerships to establish the role of public universities in combating climate change in the Lower Tocantins region.

This meeting featured the participation of Prof. Dr. Marcela Vecchione, from the High Amazonic Studies Center (Núcleo de Altos Estudos Amazônicos - NAEA), from UFPA, discussing the theme “Climate Justice and the University in the Amazon.” Her lecture was highly significant for the political and environmental education of researchers, addressing issues related to the hydro, mining, and agricultural expansion of capital in the hydrographic and terrestrial basin of the Tocantins River. Below are some excerpts from her presentation.

In the first part of her speech, Professor Marcela emphasized how climate change connects, both with local territories and with global processes, interconnecting geographic cycles with economic cycles and infrastructure.

“The dynamics of climate change are connected to territories but also aligned with global processes. The global value chain we will be dealing with here is that of soy integrated with livestock, understanding that the relationship between the states of Mato Grosso and Pará has a geographic and economic cycle that is interconnected. The infrastructure and logistics of a global value chain do not expand and do not become territorialized without the expansion of infrastructure and logistical processes. By infrastructure and logistics, we mean the implementation of ports, waterways, hydroelectric plants to provide energy for these complexes, floating transshipment barges and ports, floating barrels, among others, connecting the Amazon territories with Europe, China, and other parts of the world”

(Prof. Marcela - NAEA)

In the second section, Marcela clarifies the common socio-environmental responsibilities that we have in relation to climate change, which must be located historically, but fundamentally differentiated, when we aim for climate justice, since not all social, economic and political groups have contributed in the same way to their acceleration:

“The socio-environmental responsibilities of all of us in this story are important to consider. Although they are common, they should be thought and acted upon in a historical context, understanding the role of each one in this process and also from the perspective of social and climate justice. These responsibilities, although common and historical, are not the same for everyone because not all social, economic, and political groups have contributed negatively in the same way to the acceleration of these climate changes, especially since the 1970s, causing a much higher increase in global warming than expected”

(Prof. Marcela - NAEA)

During this meeting, the teams of researchers from the six municipalities presented their experiences derived from the actions carried out in their specific communities, showcasing the results of presentations, dialogues, meetings, experimental classes in schools, videos on reforestation practices and land and river conservation carried out in riverside schools and communities.

This meeting highlighted the need to understand, with more technical, scientific, and geopolitical foundations, the dimensions of climate change involving climate justice, social vulnerability, and global production chains, among other issues that have forced the creation of a network of dependence on local populations within their production, creation, and sustainability ecosystems, as dictated by the imperatives of the global production chain.

Some reflections on the actions and research carried out in these four meetings:

The meetings held during the creation and structuring of the COGTER of the Tocantine Amazon provided opportunities for independent and coordinated moments of training, research, and knowledge production that pointed to some foundational elements for understanding climate change in the Tocantine Amazon and its impacts on the university:

- By bringing together individuals belonging to peasant, quilombola, riverside, fishing, and extractivist groups, as well as union leaders and social movements, participatory action research has been able to identify the social, productive, and environmental demands that involve the lives of researchers, teachers, students, technicians, and administrators in university and basic rural education.

- The climate changes occurring in the Tocantine Amazon region in recent years are negative outcomes of the implementation of the global production chain that invests in infrastructure and logistics to expand the bases for hydro, mineral, and agribusiness exploitation in the region.
- The activities of participatory action research have shown that the “Climate Change” issue is not a recurring theme in the academic agendas of undergraduate and graduate courses, having minimal integration in teaching and teacher training actions, research, and course curricula.
- The research actions have sparked a debate on “Climate Change” among the Faculties of Rural Education, Education, Geography, History, and Agronomy, as well as the Postgraduate Programme in Education and Culture (PPGEDUC) of CUNTINS.
- Research actions have fostered practices to defend and combat the destruction occurring in peasant communities, as well as the valorization of nature in their upland and floodplain areas, understanding forests, rivers, and lands as territories of nature that emanate wisdom and learning.
- Research actions have made it possible to create content and indicators of theoretical-methodological and epistemological reference anchored in the affirmation of sociocultural, productive, biological, and environmental diversity, as well as assisting in the fight against the destruction of rivers, forests, and lands. They advocate for the formulation of public policies focused on teacher education, family farming, and agroecology capable of guiding teacher training and the conduct of scientific research concerned with the defence and valorization of the heterogeneity of the Tocantine Amazon.

In Appendix 2 of this text - *Organizations, Entities, and Participating Movements in the Research* - we include the nearly forty entities,, organizations and social movements involved with the Participatory Action Research in the creation process of the Territorial Governance Collective of the Tocantina Amazon, and thus, it is possible to understand the diversity and scope that constitute the riverside, quilombolas and extractivists social movements participating in the study.

The participatory action research that we are carrying out in the municipalities, with a view to building the COGTER of the Tocantine Amazon, reveals with very significant and diverse evidence that professors and students of the university, in dialogue and interaction with the leaders of the peasant, riverside and quilombola social movements of the municipalities participating in the study, converge efforts to confront collectively the actions of market agents regarding the control of nature. In our understanding, this process represents an important step in the construction of a different environmental paradigm, which makes it possible to understand being with nature, the other and with the world, surpassing the relationship of knowledge to a dialogue between beings and knowledge, the



synergy of biodiversity and the fecundity of otherness (Leff, 2006, p. 22).

2. Inter-ethnic COGTER of Moju

This COGTER involves the São Sebastião Community located in the Jambuaçu Quilombo and the Anambé indigenous territory, in the construction of a wide web of political relations and production of traditional and scientific knowledge, which articulates families and leaders of these two peoples, quilombolas and indigenous peoples, to face the environmental and climate impacts in their territories (Figure 5).

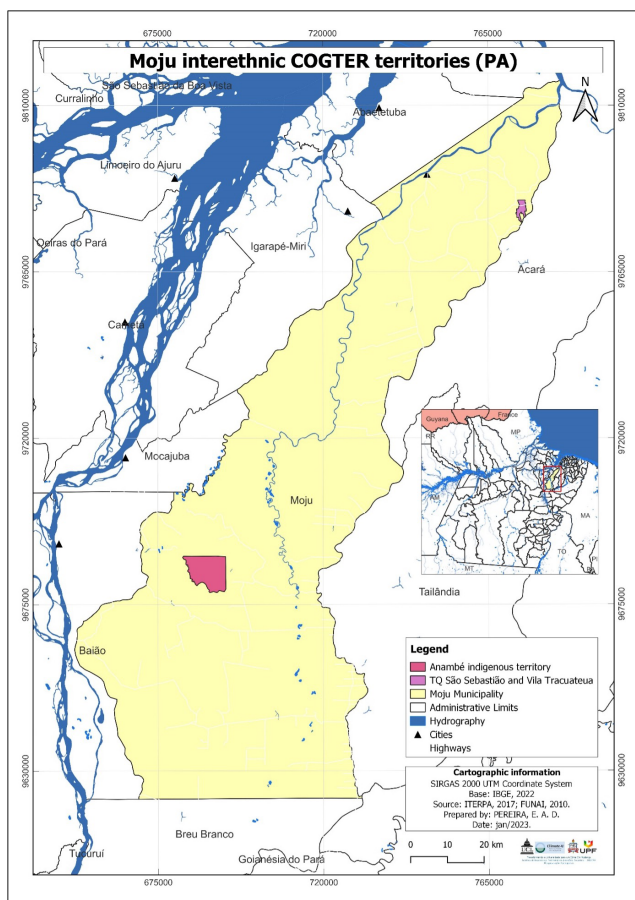


Figure 5: Anambé Indigenous Land and Quilombola Communities of São Sebastião in the Municipality of Moju (PA), Interethnic COGTER (Source: Interethnic COGTER of Moju, 2023).

The reality of both communities presents singularities, when the issue of climate change is highlighted, since the factors that have generated social and environmental transformations are originated by the growth of deforestation caused by private and public undertakings, such as: opening of roads; the installation of high voltage electrical networks; pipelines crossing forests, rivers and streams; and the agribusiness of palm oil, coconut and soy which are produced on a large scale, generating intense movement of heavy trucks in their territories. The effects of this accelerated process of destruction are felt by the communities

that traditionally occupy these territories.

The activities developed during the PAR with the traditional communities of the Interethnic COGTER involve people from the countryside and the forest, residents and leaders of organizations and social movements of quilombola peoples, especially from Quilombo de Jambuaçu and indigenous people of the Anambé ethnic group, in addition to professional researchers, teachers, undergraduate and graduate students at the Federal University of Pará.

The quilombola territory of Jambuaçu belongs to the municipality of Moju, located two hours from the city of Belém, capital of the state of Pará. This territory currently comprises 15 communities: São Bernardino, Bom Jesus do Centro Ouro, Nossa Senhora da Conceição, Conceição do Mirindeua, Nossa Senhora das Graças, Santa. Luzia do Traquateua, Santo Cristo, Santa Maria do Mirindeua, Santa Maria do Traquateua, São Manoel, Jacundaí, Ribeira, Santana Axé do Baixo Jambuaçu, São Sebastião and Santa Luzia-Poacê (Figure 6). However, São Sebastião has been the location for a political organization that involves children, young people, adults and the elderly in the processes of social, cultural, environmental and spiritual reproduction based on their relationships with the elements of nature, and for this reason it is constituted as one of the research fields of PAR.

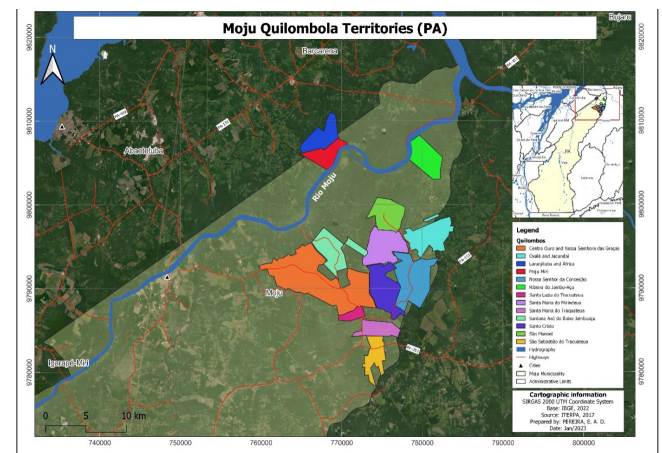


Figure 6: Titled quilombola territories in the municipality of Moju (PA) (Source: Interethnic COGTER of Moju, 2023).

The PAR that we carried out has been building with the Quilombola Community of São Sebastião a web of political relations and the production of traditional and scientific knowledge, which articulates with the families and leaders of the Indigenous land of the Anambé, located at the other end of the municipality of Moju. The reality of both communities presents singularities when the question of climate changes is highlighted, since the factors that have generated social and environmental transformations originate with the growth of deforestation caused by private and public undertakings, such as the opening of roads, the installation of high voltage networks, pipelines crossing forests, rivers and streams, the agribusiness of palm oil, coconut, soy that are produced on a large scale, generating intense movement of heavy trucks in their territories.

The effects of this accelerated process of destruction are felt by the communities that traditionally occupy these territories. Indigenous peoples have reported their negative experiences generated by changes in economic, social and cultural behavior in the daily lives of their families, such as: the decrease in hunting, instability in the rainy season that affects production in family agriculture, of their own fruits of the region - mango, murici, peach palm, increase/decrease in river waters and a considerable increase in temperature in the microclimate of the Anambé indigenous territory and in the Quilombo de Jambuaçu.

The Anambé territory also faces other problems that are similar to those of the São Sebastião community, in the Quilombo de Jambuaçu, such as the denial and violation of social, economic and environmental rights. The territory is located in the municipality of Moju, five hours from the city of Belém, by road system. The Anambé are part of a large indigenous group that lives in the State of Pará. Currently this state is home to one of the greatest ethnic diversities in the country, with more than 55 ethnic groups; that is, approximately 60,000 indigenous people, speakers of 30 languages from the linguistic groups Karib, Macro Jê, Pano, Nheengatu, Tupi, Juruna, MunduruKu and among others, inhabiting more than 25% of the territory of Pará, distributed across more than 77 indigenous lands and territories in more than 52 of the 144 (one hundred and forty-four) municipalities of Pará.

These peoples currently live in different contexts: a) indigenous communities and peoples living in 52 cities, including the capital Belém, who have not received specific attention to guarantee their original rights and social benefits from this State; b) peoples and communities living close to cities, their territories, when they still own them, are surrounded by farms and settlers, losing the diversity of products and barely managing to combine basic activities of agriculture and gathering; c) peoples and communities with their territories far from urban centers that continue to articulate agriculture, gathering and other activities based on the sustainable use of nature's riches. These peoples currently face the vested interests of loggers, miners, hydroelectric plants and other large enterprises linked to agribusiness agents, with the planting of soy, palm oil, coconut and cattle raising; and d) uncontacted peoples and communities (autonomous or in voluntary isolation), which should be protected through guarantees of access and conservation of the riches of nature on which their lives depend (FEPIPA, 2021).

The training, data and information collection and collective intervention activities developed with the traditional communities of the Interethnic COGTER of Moju are multiple and carried out in alternation, with moments in which we gather in the São Sebastião community, in the Quilombo and in the Anambé Indigenous Land, the rural and forest subjects, leaders of organizations and social movements of these peoples with professionals, researchers, professors, undergraduate and postgraduate students from the Federal University of Pará; and moments when activities are carried out in the Quilombo and in the Indigenous Land, among the residents and leaders of these territories.

As a whole, these research activities have had an impact on

universities in three dimensions: on scientific theories and on methodological and political issues that involve ways of knowing how to do research and training subjects in dialogue with traditional communities, highlighting that research developments, referenced by the centrality of PAR/COGTER's concerns, guide climate justice and the defence of dignified lives in our pluri-ethnic Amazon.

We share some evidence produced during our research relationship with universities and traditional populations:

a) From the Scientific point of view: The qualitative data obtained through the narratives of the participants of the Inter-ethnic COGTER were registered as impressions and fundamental productions for the understanding of the existing complexity in the relationship of children, young people, adults and elderly of the indigenous villages and quilombola communities with their agro-hydro-forest environments. In the midst of conversation circles, participants articulate knowledge from the past and the present, generating educational and interactive conditions in these spaces for different age groups.

Shared knowledge technically resignifies and redefines meanings, concepts and perceptions of hermetic nature, or the practice biased by the natural and social sciences, especially in the academic field when dealing with the processes of use, appropriation and management of traditionally occupied territories and the riches that dominate the different ecotones of local nature (region resulting from the contact between two or more bordering biomes).

The indicators built in and from the field have been used in our studies, by university agents, to carry out analyses and cataloging of the environmental effects on the microclimate of interethnic territories. By listening to the life stories of the elderly reporting the difficulties of their experiences throughout their lives in these territories, we reinforce the assertion that the climate in this region has been suffering and causing changes in the behavior of fauna, flora, rivers, rains, the water table, the level of the lakes, the hydrological cycle and consequently in the socio-cultural dynamics of these peoples.

Public universities, which are present in this PAR, strengthen their academic and social commitments, and feel impacted and in the obligation to review their concepts, to reformulate their research themes, their lines of research and their own social relationship with local societies, since the product of their scientific research is important in and for reflection and social, cultural, economic, spiritual and environmental reproduction of indigenous peoples and quilombolas, particularly in the municipality of Moju, in the State of Pará.

b) From the Methodological point of view: the Inter-ethnic COGTER of Moju adopted a repertoire of research-action-reflection techniques, where researcher-community interactivity and activism/militancy are built as a "sine qua non" of a self-managed partnership with quilombola and indigenous leaders,



aiming at the development of mutual trust and consent in the establishment of necessary agreements for the consignment of socio-environmental studies in their territories, aimed, above all, at the interests of the participants and that can feed back the future of political relations and academic aspects of the triangle: “quilombola community/indigenous territory - university - local public/governmental institutions”.

The methodological strategies consisted of organizing logistics imposed by the geography of the region, as it requires a long journey from the capital to the quilombola and indigenous communities, located in the rural territory of the state, in particular, to opposite ends of the municipality of Moju.

The holding of meetings with and in the community was preceded by planning with the leaders, where schedules of joint actions are established, such as inviting people of different ages to dialogue throughout the day (morning, afternoon and evening), with the aim of exchanging information and (re)learn to look at the problems faced in and by quilombola communities and indigenous territories from other angles.

The issues raised during the conversation circles reflected a dialogicity of inter-ethnic knowledge, contradictions and internal and external conflicts in a trans-territorial way. The researchers and assistant-researchers linked to the university acted as facilitators, advising and mediating interrelationships when they dominate the themes that emerge in the debates, and when these themes escape the expertise of the researchers, in the next meetings invitations were made to specialists and/or leaders who could resolve doubts, in addition to providing guidance with propositions and alternatives and viable solutions, making the university perform its social and political role in combatting the precariousness of life and the environment in these communities. It is in the conversation circles that each participant expresses, whether through drawings, social cartography, life stories, dances, music, cuisine, handicrafts, in the exchange of products and exchange of knowledge, in interpersonal behaviors, in experiences with housework or linked to their ways of generating income, which they re-learn by recording this important information traversed by approaches that deal with the transformations that their territories have been facing with climate change.

C) From the Political point of view: The meetings in the communities are configured as moments of political self-formation, in that the leaders share their experiences of struggles and resistance in the face of attempts to violate the rights of their original and traditional territories claimed or already recognized and demarcated by justice.

The interests of leaders in building partnerships with universities in this research are fuelled by the possibility of university researchers supporting and committing themselves to struggles in defence of their already ensured rights and/or obtaining information on legal means to guarantee the preservation of nature and their cultures. The instrument that, politically, has been suggested and used to face private and governmental undertakings that present a

high risk to the continuity of the maintenance of environmental dynamics and protection of the environment within and around their territories, is the Autonomous Protocol of Prior, Free, Informed, in Good Faith Consultation and Consent, internationally recognized by ILO Convention 169.

The communities, understanding that climate justice can only be achieved in the political organization of the social movement, asked university researchers for technical support for them to build and publicize the document of the Interethnic Protocol of the Quilombolas of Jambuaçu and Indigenous Anambé of the municipality of Moju.

From the relationship of the triangle “quilombola community/indigenous territory - university - local public/governmental institutions”, the collective construction and publication of the Autonomous Protocol of Prior, Free, Informed, in Good Faith Consultation and Consent of the Anambé was generated as a proposition of the Inter-Ethnic COGTER of Moju.

Methodology

Participatory Action Research (PAR) is the methodology we have used to create the Territorial Governance Collectives, as researchers build diagnoses and plans for environmental and climate impact and sustainable development in cooperation with local communities and organizations willing to cooperate, forming an interconnected network of partners, which can more effectively ensure the defence and sustainability of their territories and communities. According to Campos et al. (2016), PAR is a highly flexible methodology, which changes depending on discussions with partners and the local context, and takes place in cyclical progressions of the following stages: diagnosis of environmental impacts and response to future climate changes; action planning, both in the short and long term; implementation of actions; and evaluation of the results obtained, which may reveal new demands or persistence of demands already addressed, which would lead to a new planning of actions, and so on (CLIMATE-U, 2021).

The execution of a PAR presents several advantages over an action-research, which happens without the participation of the community. Among them, we can mention the extremely fruitful dialogue between the researchers’ academic knowledge and the traditional knowledge of the communities involved, which reaches specific aspects and contexts of reality that the researchers in question are generally unaware of. We can also mention the effect that involvement in a project of this nature has on raising the awareness of the community and partners, the importance of climate change in their future and the whole world, as well as the vital need for models of sustainable development. At PAR, the greatest benefit is the mobilization and long-term engagement of the community, which is also considered the greatest challenge for entities engaged in environmental issues.

The strategy used to carry out training activities, production of knowledge and collective intervention that took place during

the PAR was the Pedagogy of Alternation, which reserves specific periods that alternate to carry out intensive training and dialogue sessions within the university, called 'school time' or 'university time'; and collective intervention actions in the communities and territories where participants live, work and develop their community practices, called 'community time'.

The Pedagogy of Alternation expands the formative territory of the subjects participating in the PAR, through the interlocution that is established in the relationship between time, space and knowledge that occurs between the different formative experiences in which the subjects participate, transcending the spaces, the timetables/times and specific knowledge of the university, and bringing them closer to the knowledge production processes that materialize in situations present at work, in cultural practices and in the lives of peasant, riverside, quilombola and indigenous subjects participating in the study.

In practice, these changes affect the investigation process, which starts to be developed through alternation as a spatial/temporal unit of integralization of two specific moments: "university time" and "community time", which are interrelated, alternate and complement each other in the articulation of different times/spaces and knowledge that circulate during the investigation, presenting itself as the differential that innovates in the formation, production of knowledge and collective intervention of the participating subjects.

In this condition, the Pedagogy of Alternation is constituted as a theoretical-methodological strategy for the formation/production of knowledge/intervention of the subjects participating in the PAR anchored in the Work-Education-Territory relationship and in the recognition that different times, spaces and knowledge are educational and, therefore, all contribute to the formation/production of knowledge/intervention of the subjects participating in the Collective of Territorial Governance. This strategy intends to constitute an educational process that enhances the dimensions that structure the ways of investigating and intervening in the reality of communities and territories.

The Pedagogy of Alternation forms and transforms everyone involved with the PAR: university professors and students, leaders of the social movements of riverside peoples and quilombolas, and residents of the communities where the studies are being carried out; in researchers/subjects who can problematize their realities and understand the dynamics of economic, social, political, environmental and cultural processes that occur in their territories with the support of scientific knowledge in dialogue with traditional knowledge and other knowledge that circulate and are produced in the territories where the subjects live.

To collect data, testimonials and information from the participants, we conducted individual and collective interviews with leaders of social movements and residents of quilombola, riverside, indigenous and peasant communities participating in the study. We also interviewed university representatives - students, professors, graduates and managers - as well as government

sectors involved with education, agriculture and the environment in the municipalities; and non-governmental, such as the Church and the union of teachers and rural workers.

In addition, we collected images, drawings and textual productions of the subjects during the alternations carried out during the PAR, at the moments when the participants gathered in university times and community times, where we also produced small videos with the narratives and activities of the subjects during the research.

The references shared in the Climate-U Network on participatory action research, environmental impacts and climate justice, sustainability and ecology of knowledge, guided the analyses that we carried out on the rich documentary and empirical materials that we gathered during the study; this allowed us to present the contributions of the results of this study to strengthen the university's actions with climate justice and the sustainability of human and non-human life on the planet.

Contributions for the strengthening of actions of the university with climate justice

Below we present the main contributions that the PAR has provided to strengthen the role and intervention that the university has played with climate justice, whether at the local, national or global level: greater engagement of the university with the involvement and commitment of students and professors with environmental impacts and climate justice in their territories; inclusion of environmental and climate issues in the research agenda, linking the climate agenda with the social agenda; promotion of community engagement projects on climate justice, including the training of educators and expanding partnerships and actions outside the university; and changes in communities participating in the PAR, involved with environmental impacts and climate change.

> **Greater engagement of the university with the involvement and commitment of students and professors with environmental impacts and climate justice in their territories**

The conventional way in which the university has been relating to local communities in general is marked by a hierarchical relationship, in which the university institution, as the holder of scientific knowledge par excellence, assumes the primary function of "disseminating knowledge", "multiplier of knowledge" or "applier of knowledge" that only she produces when investigating human beings and their collectives, communities and territories; nature, work, cultures and society as objects of its investigation, framed as scientific problems to be solved by it, with the relevance, methodologies and research rhythms also defined by the university.



The agents who participate in this production share the same goals of knowledge production, have the same training and the same scientific culture and do so according to well-defined organizational hierarchies. Still in the logic of this knowledge production process, the distinction between scientific knowledge and other knowledge is absolute, as is the relationship between science and society. The university produces knowledge that society applies or not, an alternative that, however socially relevant, is indifferent or irrelevant to the knowledge produced. (Santos, 2004)

In the case of the PAR that we carried out, the university has been playing a differentiated, dialogical research role, committing itself to listening to local communities about environmental issues and climate change, becoming a partner in the search for answers and collective solutions to the problems that imply the vulnerability of communities in the face of climate emergencies.

Instead of demanding actions from the university, or receiving solutions with individual or collective proposals formulated by the university, with the realization of the PAR, the local communities also changed their role in the investigation, strengthened their protagonism and started to decide and formulate together with the professors and students of the university: the environmental and climatic problems of their daily reality that they are interested in approaching, investigating and modify; determining the relevance criteria for these issues; and the solutions for them.

Thus, the university began to look at local communities in a different way: as partners in the quest to produce new ways of acting and transforming social reality, ceasing to be just the object of studies or the empirical locus of case studies. The university itself has become a fundamental partner that contributes to the community to build its autonomy in the construction of collective projects, common actions, with perspectives of transforming its socio-environmental conditions and the social relations that constitute it. These further challenges the way the university deals with the requests or demands presented to them by society.

This evidence shows that the PAR is not just an instrument for investigating a local reality by academics, students and professors. The PAR constitutes a collective action that is established in the negotiation between the local communities and the research agents - professors, students and graduates -, who represent the university; and in this process, both the university and the local communities are changing their conventional ways of getting involved with the investigation processes and are valuing the different ways of intervening in the process, valuing the differentiated knowledge and feeling-thinking that circulate in the investigation processes.

In the specific case of our PAR, among the research agents there are also leaders of social movements and residents of local communities - quilombolas, indigenous people, riverside people and peasants - where investigation actions have been carried out, a situation that has shown: a greater interest and approximation of people from local communities in activities carried out

within the scope of the university; and at the same time, it has provoked changes in the forms of engagement or possibilities for the university to contribute to the search for a solution to socio-environmental problems involving local and global climate change.

Strengthening the participation of research agents, professors, students and graduates of the university and leaders of social movements and residents of quilombola, indigenous, riverside and peasant communities in various public debate forums that have been taking place in the region where we are building the Collectives of Territorial Governance, is a concrete example of changes in the conventional way of carrying out studies, in particular, those involving the environmental and climate impacts of large waterway and mining projects that affect fishing, agriculture and extractivism in the territories of the peoples quilombolas, indigenous people, riverside peoples and peasants.

- Researchers and students from the university and riverside and quilombola communities, in the six municipalities involved with PAR, actively participated in the First Meeting of the Peoples of the Waters of the Lower Tocantins Rivers, which took place in the municipality of Cametá from 14th to 16th of November, 2019; and the Second Meeting of the Peoples of the Lower Tocantins Rivers, held in the municipality of Baião, on the 16th and 17th of July 2021;
- Likewise, they also actively participated in the collective organization in Defence of the Tocantins River, which traveled by boat part of the stretch planned for the construction of the Araguaia-Tocantins Waterway, from the municipality of Barcarena to the municipality of Itupiranga in southeastern Pará, crossing 11 municipalities in the region, from January 30th to February 5th of 2022;
- PAR researchers also participated on the First Forum of the Movements of Artisanal Fishermen and Fisherwomen of the Tocantine Region, held on November 6th and 7th of 2021 in the municipality of Limoeiro do Ajuru, by movements and organizations of local fishermen.
- They also participated on the First Meeting of Agroecology of the Territory of Lower Tocantins, held between the 16th and 18th of March 2022 in the municipality of Cametá, where the *"Participatory diagnosis of climate changes and conditions of the Territory of Lower Tocantins"* was carried out by the JIRAU movement of Agroecology.

In fact, the process that we are building with the PAR, of building the Collectives of Territorial Governance, has been fundamental to strengthening the participation of students, teachers and community members in facing the situations caused by the large agro-mineral exporting enterprises, which increase the vulnerabilities of the native and traditional populations in the face of local and global climate changes and their hydroclimatic repercussions in the region, opening up the possibility for the university to respond in a much more effective and creative way

to the social needs of climate justice.

> **Inclusion of environmental and climate issues in the research agenda, articulating the climate agenda with the social agenda**

The Study and Research Group on Education of the Rural, Waters and Forests in the Amazon (GEPERUAZ) is linked to the Institute of Educational Sciences of the Federal University of Pará (UFPA) and is formed by an expanded group of professors and students from various educational institutions higher education and professionals who work in different educational and social spaces, with training in different areas of knowledge, who since 2002 have carried out coexistence activities in research, extension and teaching, in an activist way, focusing on the Education of the Rural, Waters and Forest in the Amazon.

GEPERUAZ actions are part of ICED's Graduate Programme in Education, through the research line Teacher Training, Teaching Work, Educational Theories and Practices, and it is currently finalizing the research project "Work, Nature and Culture as references for the construction of the Rural Public School in the Amazon", which addresses the realities, conflicts and challenges of Nature, Work and Culture in the Amazon as references to analyze Educational Policies, Education and School; basing the study on the theoretical-practical contributions of the relations of reciprocity and complementarity between human beings and nature expressed through Good Living; cooperative and diversified work based on agroecology; and dialogicity and ethics as principles of critical interculturality.

Despite all the theoretical and practical accumulation that the group has been accumulating in its 20 years of existence, it was only with the insertion of the group in the Climate-U Network, that environmental impacts and climate change began to be discussed more systematically, and a concern emerged to guide these issues in the multiple teaching, research and extension actions that the group carries out, involving the training of teachers, education for children and young people, adults and the elderly, higher education, the formulation of educational policies and studies on the curriculum and educational practices in rural education, indigenous and quilombola school education.

The encouragement for our field research, within the scope of the Climate-U Network, to be developed through the participatory action research, further strengthened the ties of coexistence that we have been establishing since the creation of the group with leaders of social movements in indigenous, quilombola, traditional and peasant communities and territories; and the initiative to articulate two Territorial Governance Collectives – COGTERs, one in the Tocantins Amazon and the other, specifically in the municipality of Moju, has been consolidating participation as a founding reference in the relationship of coexistence that we have sought to establish between students and professors of universities and leaders of social movements and residents of

indigenous, traditional and peasant communities.

In addition to the COGTERs, we carried out a qualitative case study entitled "Waterway Enterprises on the Tocantins River, Environmental Impacts and Violation of Human Rights: Case Study with the Traditional Peoples and Communities of Capim Island, in the State of Pará", where we investigated the implications of the waterway projects on the Tocantins River in the installation of the Private Use Terminal – TUP. We identified the changes that nature has been facing and the situations of violation of human rights of the peoples and traditional communities of Capim Island and Xingu Island with the implementation of these projects, particularly in the municipality of Abaetetuba. (DIAS PEREIRA, 2023)

In fact, participation in the PAR helped GEPERUAZ researchers to become involved with a broader and more complex set of issues involving the agenda of climate change, giving rise to a set of collectives within the group, which began to participate in the Climate-U Network, focusing on the discussion on the impacts of climate and environmental changes in their territories and communities, including these issues in formation, research and extension actions that they have been developing with the people of the rural, waters and forests of the Amazon.

Thus, with the implementation of the PAR, we strengthen the production of specific knowledge about the interactions we have with the environment, communities and Amazonian territories, which occur in the training courses for researchers or in the research and extension actions that we carry out, and we strengthen the interpretation of specific local situations, establishing their possibilities and relationships with broader problems related to the planet's climate and the impacts on their territories of life.

What PAR has shown us, therefore, is that UFPA, in its training courses under the leadership of GEPERUAZ, has not been oblivious to climate change, but the relationship of these changes with the daily lives of people who live in the Amazon still needs to be addressed and deepened, so that the members of the group can interpret these issues in their territories of life, establishing relationships with their insertion on the planet, marked by a changing climate.

A good opportunity that these courses have to give a differentiated approach to climate change in their formation processes concerns the moment of curriculum reform we are experiencing, with the possibility of more consistently addressing the discussion on climate change in the Amazon and the challenges related to the sustainability of the planet in our Basic Education curricula.

Unfortunately, our schools and the curricula that have been implemented in them are still very insensitive to these discussions and rarely include the problems of climate change in the Amazon in the contents of the areas of knowledge. Such changes are an important requirement for the population of the Amazon and Brazilians to engage with more effectively in the set of actions and programs that act with the protection of nature and of our diverse biomes, indispensable for our good living with dignity.



> **Fostering community engagement projects on climate justice, including teacher education and expanding partnerships and actions outside the university**

Our participation in the Climate-U Network, especially with the realization of the PAR, has motivated the involvement of other UFPA professors and students, especially from the University Campus of Tocantins, with the network and with discussions and actions that guide climate change, strengthening with this the participation of the university itself in the broader debate about changes and climate justice, with national and international activities that address these issues and highlight the importance of the Amazon in this process.

More specifically, the development of the PAR has motivated the incidence in the construction of the Unit Development Plan (PDU), of the CUNTINS/UFPA, where the issues that address sustainability appear in its actions and goals, but too generalized and dissociated from issues related to change and climate justice. The execution of the PAR has also been affecting the curricular changes that are taking place in the curricula of the undergraduate courses offered by CUNTINS/UFPA, guided by curricular flexibility and the incorporation of community engagement into the curriculum, strengthening the agenda of climate change in the daily life of the courses and of the actions that the university performs with the communities of the Tocantine Amazon.

Finally, the development of the PAR has led to our participation and that of other professors and students in the Territorial Development Forum that the CUNTINS/UFPA coordination has organized together with other public and teaching institutions in the Tocantine Region, to strengthen the leadership of the university and its contributions to local territorial development, which includes the climate change and climate justice agenda.

> **Changes in communities participating in the PAR, involving environmental impacts and climate change**

The leaders of the social movements participating in the PAR began to link the fight against climate change to the action-research they carry out in their territories, strengthening the role of local organizations and social movements and, with that, began to build more effective and consequential intervention strategies in defense of nature and its territories, and in the face of environmental impacts and climate changes that exist in them.

We highlight below some initiatives that took place during the PAR of COGTER in the Tocantine Amazon, involving the educating of teachers who are also leaders of social movements, and act as teachers in public schools, in primary education in their

communities, addressing themes and questions about climate change, as the following statement illustrates:

For me, as a person, as a teacher, it has been extremely important in my life, because I am able to take it to the students and I am learning a lot and I hope to contribute more to our Quilombo. We, as researchers and professors, are now always putting climate change on the agenda and taking it to the debate and dialogue. We are doing this because the community is accepting it greatly and also when the community accepts a project like this as great value, we have to move forward. Therefore, for us it is very rewarding because the community is accepting it.

(Francilene – teacher and quilombola leader in the municipality of Baião)

The understanding that has been built with the participation of social movement leaders as researchers, within the scope of the PAR, as producers of knowledge together with university agents, has been very important for this research. It has contributed to the empowerment of the subjects' and their collectives protagonism, that now includes the biomes and the environment, in articulation with the sociocultural, productive, religious, political and educational dynamics of the riverside and quilombola communities of the Tocantine Region, with multiple learnings, related to climate change issues, as evidenced in this report:

Despite hearing a lot about climate change through the media, I didn't realize the scale of the situation. From the moment I started to participate in research at 'university' and 'community time', I was able to understand a little more the harm that this has been causing for us human beings, for nature and for the Amazon. So the research is very important because it is a moment of a lot of learning, from the moment we go to the community and start to observe many things that we already knew, but sometimes we think that it has nothing to do with the climate change. So, from the moment we start to understand about climate change, global warming and changes that have been taking place in time and in nature, we start to realize that everything is related to human action and climate change.

(Rute, leadership of the Quilombola Community of São José de Icatu-Mocajuba, on August 4th, 2022))

In fact, the PAR that we carried out with the leaders of riverside, peasant and quilombola social movements in the Tocantine Region, addressing climate change in the Amazon and in Brazil, is embodied in epistemological spaces, or even in circles for the production of new knowledge, attitudes, practices and concepts co-produced with the syntropic relationship between human beings and nature, where the intercultural experiences with the land, plants and waters constitute the ecological power and the political, educational and sociocultural metabolism of social movements to see, care for, protect and prevent nature, their common home, from being the target of global environmental destruction.

Climate change and climate justice, and local and global socio-environmental impacts gain centrality in the production of critical and subversive scientific knowledge within the social movements involved with the PAR, and begin to stress modern rationality, coloniality and capitalism environment, contributing to the disruption of the sacrificial logic that was embedded in consumption and in the market on the riverside and quilombola territories and their knowledge built with/between nature, and not against it.

*Amazonian lives, human and non-human, matter!
Amazon alive, it matters!
The lives of the peoples of the Amazon matter!*

*Our territories are continually threatened,
With the advance of illegal mining and logging,
With the impacts of large projects
With climate changes caused by business agents.*

*Down with managerial environmental protection,
We fight for climate justice,
Accountability of those who cause climate change,
Climate justice is not restricted to the environment,
Climate justice is a human rights issue!*

*Let's Amazonize the World!
With the Amazon Alive!
Let's Amazonize the University!
Learning from the people of the countryside, the waters and
the forests!*

(Salomão Hage)



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APPENDIX 1 – Team of Researchers from the Tocantina Amazon' Territory Governance Collective – COGTER

Territory Governance Collective – COGTER of the Tocantina Amazon: Participatory Action Research (PAR) involving the municipalities of Cametá, Baião, Mocajuba, Oeiras do Pará, Limoeiro do Ajurú and Igarapé Miri, located close to the Tocantins River, victims of environmental impacts such as: pollution by pesticides, deforestation on the banks and siltation, and recurring environmental impacts of the Tucuruí Hydroelectric Plant.

Coordination of PAR – COGTER of the Tocantina Amazon:
Salomão Antônio Mufarrej Hage – Federal University of Pará
Edir Augusto Dias Pereira – Federal University of Pará
Oscar Ferreira Barros – Federal University of Pará

Team of Researchers by Municipality

CAMETÁ

- Ademir Junior Souza Lopes - Federal University of Pará (UFPA)
- José Edinan Assunção Mendes - Student of the Bachelor's Degree in Rural Education

BAIÃO

- Suelem Ramos de Lima - Association of Residents Fishermen and farmers Remnants of quilombos in the village of Cardoso
- Joãnilda de Moraes Pinheiro - Union of Rural Workers of Baião (STTR)
- Francilene da Assunção Brito - Union of Workers in Public Education of the State of Pará (SINTEPP)
- Rosaly Ferreira Moreira - Association of Quilombo Remnants of the Communities of Calados and Caranãzal (ARQCC)
- Marta Leite Dia - Association of fishermen and farmers remaining from Quilombos in the village of Cardoso (AMPARQC)
- Gildete de Freitas Medeiros - Association of Quilombo Remnants of the Communities of Calados and Caranãzal (ARQCC)

MOCAJUBA

- Rute Helena Dias dos Santos - Quilombo Remnant Community São José do Icatu

- Ulielso Alves - Student/UFPA

OEIRAS DO PARÁ

- Manoel de Nazaré Amorim Bastos - Our Lady of Nazareth Community
- Josafá Lopes Gomes - Graduate of Rural Education 2016, (Artisanal Fisherman from Colônia Z-50)
- Benedito Pereira Coelho - Municipal Secretary for the Environment (SEMMA)
- Ester Maria Lopes da Silva - Igarapé Arira Quilombo Remnant Association (ARQUIA)
- Simone Gonçalves da Silva - Rural Workers Union (STTR)

LIMOEIRO DO AJURÚ

- Ronaldo Brito Costa Cardoso - River fishing agreement
- Andrei Leão Pastana - Our Lady of Perpetual Help Community
- Léia Diniz Assunção - Our Lady of Perpetual Help Community
- Helena de Assunção Silva - Our Lady of Perpetual Help Community
- Amanda de Cássia Silva Gonçalves - Resultados de tradução Resultado da tradução Association of Artisanal Fishermen and Fish Farmers of the Municipality of Limoeiro do Ajuru (APASPILA)
- Ariete Pastana Leão - Popular Youth Uprising

IGARAPÉ MIRI

- Everaldo da Silva Costa - Union of rural workers of Igarapé-Miri (STTR)
- Manoel de Jesus dos Santos soares - Union of rural workers of Igarapé-Miri (STTR)
- Ernandes de Lima Oliveira - Union of rural workers of Igarapé-Miri (STTR)
- Marivaldo Correa da Costa - Mutirão Association



APPENDIX 2 - Organizations, Entities, and Participating Movements in the Research

1. Pará Education Workers Union - SINTEPP (Baião)
2. Remnant Quilombola Association of the Calados Community - ARQUICC (Baião)
3. Association of Remnant Quilombo of Bailique Centro - ARQB (Baião)
4. Rural Workers Union - STTR (Baião)
5. Association of Residents of the Calados Community - AMORCC (Baião)
6. Association of Residents, Fishermen, and Remnant Quilombo Farmers of Cardoso - AMPARQC
7. Rural Workers Union - STTR (Cametá, Igarapé Miri, Baião, Limoeiro do Ajuru, and Oeiras do Pará)
8. Association of Remnant Quilombo Communities of São José do Icatu (Mocajuba)
9. Association of Residents of Vila de Areião (Cametá)
10. Municipal Fisheries Secretariat of Limoeiro de Ajuru
11. General Association of Women in the Municipality of Limoeiro do Ajuru (AGEMMLA)
12. Cooperative of Artisanal Fishermen and Family Farmers - COPAAF (Limoeiro do Ajuru)
13. Community Fishing Agreement of the Cardoso River (Limoeiro do Ajuru)
14. Rural Workers Union - STTR (Limoeiro do Ajuru)
15. Municipal Department of Agriculture, Rural Development, and Economy - SEMADRE (Cametá)
16. Quilombola Movements of Cametá, JIRAU Agroecology Network (Cametá)
17. Association for Support to Needy Communities - APACC (Cametá)
18. Women's Association (Igarapé-Miri)
19. Sumaúma Island Settlement (Igarapé-Miri)
20. Youth Pastoral Care (Igarapé-Miri)
21. Juarembu Island Settlement (Igarapé-Miri)
22. Remnant Quilombola Association of Igarapé Arirá - ARQIA (Cametá)
23. Association of Fishermen and Aquaculturists of Oeiras do Pará - APAOP
24. Fishermen's Colony Z-50 of Oeiras do Pará
25. Union of Fishermen and Aquaculturists of Oeiras do Pará - SINDPART
26. Association of Residents of the Extractive Reserve - Arioca/Pruanã - AMOREAP (Oeiras do Pará)
27. Municipal Department of Agriculture, Oeiras do Pará
28. Women's Group of Oeiras do Pará
29. Municipal Department of Agriculture, Oeiras do Pará
30. Association of Ribeirinho Residents of Nazaré Zinho (Igarapé-Miri)
31. Fishing Agreement of the Lower Anapu (Igarapé-Miri)
32. Cooperative of Recyclable Material Collectors of Limoeiro do Ajuru
33. Saracá Fishing Agreement
34. Association of Remnant Quilombolas of the Jussara River - ARQRJ (Limoeiro do Ajuru)
35. Parish Social Pastoral Care (Limoeiro do Ajuru)
36. Association of Artisanal Fishermen of Mocajuba - ASPAM
37. Fishermen's Colony Z-38 of Mocajuba
38. Association of the Islands of Viseu (Mocajuba)
39. Association of the Settlement of the Islands of the São Joaquim-Santana River (Mocajuba).



Climate-U

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About Transforming Universities for a Changing Climate

Climate change is the most significant global challenge of our time, and many of its effects are felt most strongly in the poorest communities of the world. Higher education has a crucial role to play in responding to the climate crisis, not only in conducting research, but also through teaching, community engagement and public awareness. This study contributes to our understanding of how universities in low and middle-income countries can enhance their capacity for responding to climate change, through a focus on the cases of Brazil, Fiji, Kenya and Mozambique. In doing so, it contributes to the broader task of understanding the role of education in achieving the full set of Sustainable Development Goals.

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