



# GUIDE *to* CLIMATE JUSTICE

*social and ancestral technologies to address environmental  
racism in the metropolitan region of Rio de Janeiro*







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# INTRODUCTION

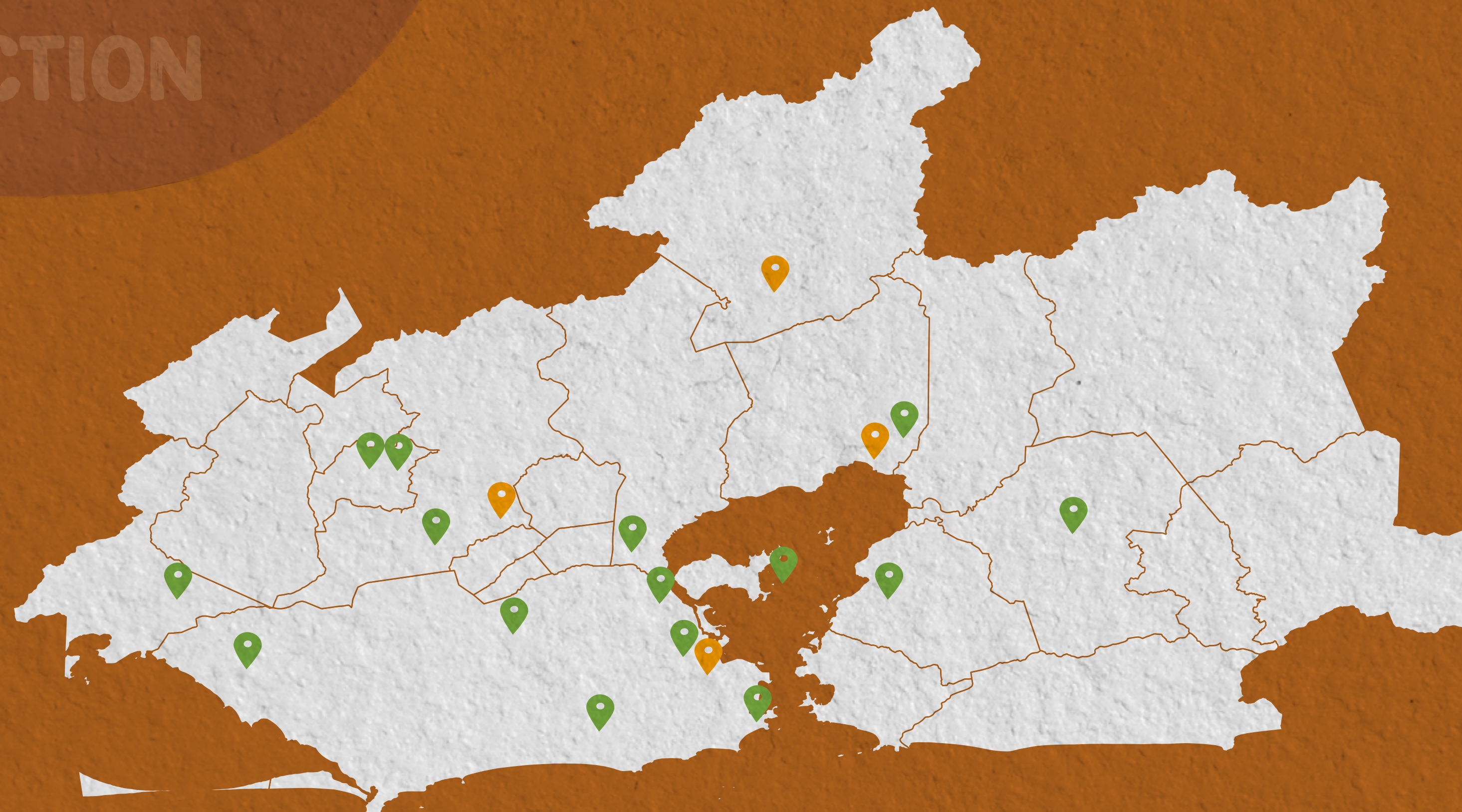
The population of the state of Rio de Janeiro has been experiencing alarming episodes related to heavy rainfall, such as landslides, floods, torrential rains – issues that year after year claim lives and generate numerous other humanitarian and structural problems. This new reality is not only about the intensity of these events, but especially about the increasing frequency of these environmental disasters worldwide. These are the impacts of climate change being felt firsthand - both directly and indirectly.

It is precisely the most vulnerable populations, those who contribute the least to this process, who suffer – and will continue to suffer – from its effects. It is within this context that the motivation arises to create the Guide to Climate Justice – social and ancestral technologies for addressing environmental racism in the metropolitan region of Rio de Janeiro. This is not born out of inspiration, but rather out of the necessity for cities to adapt to the challenging global and local scenario.

The first edition of the Guide to Climate Justice aims to systematically organize the experiences of practices, solutions, and social and ancestral technologies developed in our neighborhoods, favelas, and low-income communities overlooked by the public authorities. These efforts aim to address climate disasters through adaptation and/or mitigation strategies for the environmental impacts suffered by those who contribute the least to climate change.



# INTRODUCTION



Fifteen organizations were interviewed, along with four leadership profiles that fight against environmental racism.

This endeavor, carried out in partnership with individuals and organizations supported by the Casa Fluminense Fund, leaders from the local Agendas 2030, and the Rede Favela Sustentável (Sustainable Favela Network), also aims to encourage the replication of these experiences among leaders and movements interested in climate justice. It strategically supports actions for local policy monitoring and influence, and serves as a support for classes, courses, workshops, and talking circles in the territories. Furthermore, it expands the understanding of the concepts of **environmental racism** and **climate justice** in the Metropolitan Region of Rio de Janeiro.

Discussing climate justice and environmental racism requires an intersectional approach that considers the dimensions of social class, gender, and race. Above all, taking into consideration different thematic axes that are part of and impact the lives of vulnerable territories, where dominant powers are exclusionary and neglect

population and environmental care.

Basic social rights such as housing, urban mobility, public security, education, and health are denied, among which, having access or not - and the quality of that access - directly reflects on how predominantly Black and poor populations will respond to meteorological and climatological events.

As always feared, and unfortunately expected, we began 2023 with tragedies related to the climate emergency in the Southeast Region. In Rio de Janeiro, favelas and low-income communities were literally submerged, demonstrating that the climate crisis is, above all, a housing crisis. In both cases, there's a marker of race, gender, and territoriality that, not coincidentally, repeats itself as a pattern of historical inequality.



## 📍 STATE OF RIO DE JANEIRO, 2019



**+ 2.1 million**  
inadequate housing units,  
mostly headed by women <sup>1</sup>



Housing deficit of  
481,000

## 📍 RMRJ, 2013 – 2022



**4.8 million**  
people affected by  
climate-related events due  
to heavy rainfall



**+ 85,000**  
housing units and public  
infrastructure damaged,  
and another 3,000 destroyed



**R\$ 1.6 billion in  
losses and  
damages <sup>2</sup>**  
Source: Defesa Civil RJ

Alongside the production of this Guide, and in alignment with the mentioned data and analyses, Casa Fluminense has been actively involved in the Parliamentary Front for Climate Justice, established in the Legislative Assembly of Rio de Janeiro, to advocate for the creation of the State Secretariat for Climate Emergency. By valuing institutions like the Civil Defense, the Public Prosecutor's Office, and taking climate seriously, this department can and should coordinate, develop, plan, and execute strategies and actions for adaptation, resilience, and mitigation, as proposed by the **Rio 2030 Agenda**.

Every research has its subjects, spaces, and environments. It also experiences its own challenges, restarts, and continuous modifications. At its core, research is intertwined with paths and analytical possibilities, all aimed at presenting outcomes – often diverging from our initial conceptions and hypotheses. Here is the richness of the commitment to research: we confront countless complexities of an object, and in doing so, we delve into new paths and new questions that will shape our life's practice.<sup>3</sup>

**Enjoy your reading!**

## INTRODUCTION

<sup>1</sup> Rio 2030 Agenda Report, with data from Fundação João Pinheiro, 2021.

<sup>2</sup> Considered climatic events: storms, floods, torrential rain, landslides, coastal and riverbank erosion, mass movements, cyclones, and cold fronts.

<sup>3</sup> Louback, Andreia. Master's thesis: Jornalistas negras no Rio de Janeiro: trajetórias de vida e narrativas de resistência diante do racismo. CEFET, 2018 ([Black Women Journalists in Rio de Janeiro: Life Trajectories and Narratives of Resistance against Racism](#))



# A B C OF CLIMATE

## adaptation

climate disasters are already a reality of the past, present, and future. **Adaptation** is an alternative to “moderate and prevent further damage.” Adaptation can involve both issues of neighborhood and favela infrastructure and architecture, as well as “makeshift solutions” that help territories confront climate impacts with fewer negative effects on people, homes, and future possibilities.

## climate anxiety<sup>4</sup>

also known as eco-anxiety, it refers to a range of mental health consequences a person experiences after undergoing traumatic climate events, such as post-traumatic stress disorder, anxiety, and depression. It primarily affects poor and racialized individuals. Despite all the evidence of mental health impacts on victims, environmental anxiety is not yet officially diagnosed by healthcare professionals.

## political advocacy

an action of pressure, mobilization, or coordination aimed at incorporating issues into planning, budgeting, and execution processes, influencing decision-makers in the Executive, Legislative, Judicial branches, or international mechanisms. It involves strategies encompassing acts and campaigns to mobilize a priority cause, create, or enhance public policies. It’s about transforming realities through political struggle, often in a non-partisan manner.<sup>5</sup>

## environmental justice

both the concept and the political movement emerged in the context of the unequal exposure of low-income populations, predominantly racialized populations, such as Black and Indigenous communities, to environmental impacts resulting from the economic model. In Rio de Janeiro, the populations living in favelas, suburbs, and outskirts are the ones suffering from unhealthy environments due to soil, water, or air pollution, proximity to landfills and industrial complexes, or areas prone to flooding and landslides, for example.

## climate justice

known as an extension of the environmental justice movements, the concept is based on the undeniable premise that the impacts of climate change are not democratic, primarily affecting racialized and marginalized populations that have contributed the least to this process. Therefore, it is a matter of social justice intertwined with gender, race, and geographical location, meaning that if floods have a more severe impact on those living in favelas, outskirts, quilombos, indigenous communities, suburban, and rural areas, these very same individuals become victims of climate injustice.

## energy justice

the search for an access to electricity that is inclusive, fair, and respects human rights.<sup>6</sup> This access encompasses economic aspects (energy costs) and the quality of the service provided. Despite being known for its clean and renewable energy, various regions of the country experience energy crises. In Rio’s favelas, for example, there is a stigma around so-called “gatos” (illegal connections), when in reality, these illegal connections are the last resource for residents due to the neglect of public authorities.



## water justice

the struggle for the constitutional - and fundamental - right to clean, drinkable water, free from color, odor, and with continuous access. When this doesn't occur, whether due to the negligence of public authorities or difficulties in access, the need to promote **water justice** arises. Additionally, the pollution of rivers, bays, and watersheds also serves as an illustration of the concept of water justice.

## mitigation

since the Industrial Revolution, the notorious greenhouse gases (GHGs), resulting from our dependence on fossil fuels, have affected us in various dimensions. Therefore, **mitigation** is a concept that demonstrates the necessity of reducing our global, national, regional, and local emissions - in the short, medium, and long term.

## energy poverty

quando o peso da conta de luz influencia diretamente o orçamento de This occurs when the electricity bill directly impacts the budget of families in economically and socially vulnerable contexts and represents over 10% of a household's monthly income. If expenses on electricity compete with basic survival costs like food, rent, medications, education, clothing, etc., we can classify it as energy poverty. The low quality of distributed energy in low income areas is also a problem due to reduced efficiency, leading to increased costs and possibilities of damage to appliances and accidents.

<sup>4</sup> <https://www.ecycle.com.br/eco-ansiedade/>

<sup>5</sup> [Edital Agenda Rio 2030 do Fundo Casa Fluminense, edição 2023.](#)

<sup>6</sup> <https://revistas.unal.edu.co/index.php/rcg/article/view/89699/84994>

<sup>7</sup> <https://www.favelasustentavel.org/midia/relatorio-eficiencia-energetica>

<sup>8</sup> <https://www.instagram.com/p/CZz4bCWJ-Qj/>

## environmental racism<sup>7</sup>

"It is the unequal exposure of certain populations to socio-environmental impacts and risks, justified by the geographical location, socio-political, economic, and environmental characteristics of specific regions, as well as by structural racism that identifies areas where vulnerable populations live as potential sacrifice zones. In these areas, high socio-environmental impact activities, pollution, contamination, and the receipt of externalities from systemic processes occur, such as illegal waste disposal, effluent discharge, and more."

## ancestral technology

ancestry can be understood as the knowledge passed down from one generation to another through memories and oral tradition (conversations, stories, and life lessons). This knowledge is culturally constructed and transmitted from parents to children through various rituals of learning and resistance. **Ancestral technology** is a tool frequently found in solutions related to family food systems and agroecology, which are significant targets of environmental injustices and deal with constant threats due to the worsening climate change in Brazil.

## social technology

a tool that guides the path of "how to do" something beneficial for communities, interpersonal relationships, and systems of coexistence. If a technique presents solutions for social inclusion, democratization of knowledge, and improvement in quality of life, it can be characterized as social technology."



# WHO FACES ENVIRONMENTAL RACISM?

Around the world, traditional, Black, Indigenous, and impoverished populations are the ones who suffer the most from environmental racism and are most disproportionately impacted by climate change. In the Metropolitan Region of Rio de Janeiro, it is no different, as they are the ones who live in favelas, who resist in quilombos and villages, and are dehumanized when basic rights are denied to them.

The main fighters in the struggle for environmental and climate justice, who transform their pain into struggles, not only for survival, but for dignity.





# PAMELA MÉRCIA



Resident of Petrópolis, postgraduate student in environmental engineering, Pamela works as an environmental consultant and educator.

## PETRÓPOLIS

Petrópolis is a city historically marked by social inequality and by the tragedies resulting from landslides during heavy rainfall. In the past year, after torrential rains, the city experienced its worst disaster, which resulted in 231 deaths and a lot of missing people.

Pamela, from the TJNS Institute, shares that she and her family, like many others, have been victims of environmental racism since childhood. A Black family with an extensive history of losses due to heavy rainfall.

*"I have slept in bunk beds, with rainwater dripping onto my face, and this happens to many other people as well. We cannot limit environmental racism solely to more deadly extreme events; it is present in the more routine rains and the daily damages caused as well."*

## A SUPPORT NETWORK AGAINST ENVIRONMENTAL RACISM IN PETRÓPOLIS

In this context, the TJNS Institute emerged in 2020 during the pandemic, with a mobilization to provide food baskets for families facing food insecurity, professional training for women, and legal assistance to access social, labor, or welfare benefits and rights.

Through the Sustenta Elas project, the Institute offers training in soap making, macramé, and thrift store management for women who are victims of rainfall, single mothers with little income and education, primarily from black communities. This project aims to empower them financially, while also providing environmental education and guidance on their rights to develop leadership for territorial public policies.

The choice to work with this population is based on the principle that homes on the city's slopes are built by both the rich and the poor, but those most affected by heavy rainfall are the poorest. That is why it is strategic to work with women who are heads of households and who are victims of these phenomena.

*"We need public policies for people living in risk areas, especially housing. As an organized civil society, we can provide education to those affected. To prevent these catastrophes, we need to engage with the victims so that they recognize themselves as such and fight for their rights. Because if many people are fighting, changes will happen faster."*



# VALDIRENE COUTO



Quilombola Leader from Magé,  
President of the Association of the  
Remnant Community of Quilombo  
do Feital (ACORQF)

## QUILOMBO DO FEITAL, MAGÉ

Mangroves are of utmost importance for sustaining life in coastal ecosystems, which are losing more and more space due to unplanned urban expansion. The ones most affected by this change are various traditional communities, such as fisher-

men and crab pickers, who have a very delicate subsistence relationship with these environments.

Valdirene, also known as Val Quilombola, is a crab picker and a licensed practical nurse. She explains that although the current situation of the mangrove is better than it was 30 or 40 years ago, the ecosystem is still affected by pollution from large enterprises in Baía de Guanabara (Guanabara Bay) and also by improper waste disposal – even in the presence of protective laws for these ecosystems.

In the quilombola struggle for over 20 years in Quilombo do Feital, Magé, Val works full-time in the activities of the community without any income. She shared that engaging in traditional fishing is becoming an increasing challenge as fishermen have to deal with large vessels, garbage, and water pollution. It is a daily overcoming of challenges that allows for “survival, but not living.”

*“My family and over 50 other families are all fishermen and crab pickers. Only a few are focused on fishing, the majority is engaged in crab picking, which is a completely artisanal and quite arduous work. Women, in particular, are at the forefront of this art, the art of crab picking.”*

## RECLAIMING THE MEMORY AND RESISTANCE IN THE QUILOMBO

Due to the challenges of daily life, the younger generation is becoming less interested in engaging in these activities, which are being kept alive by the hands of the elders within the quilombo.

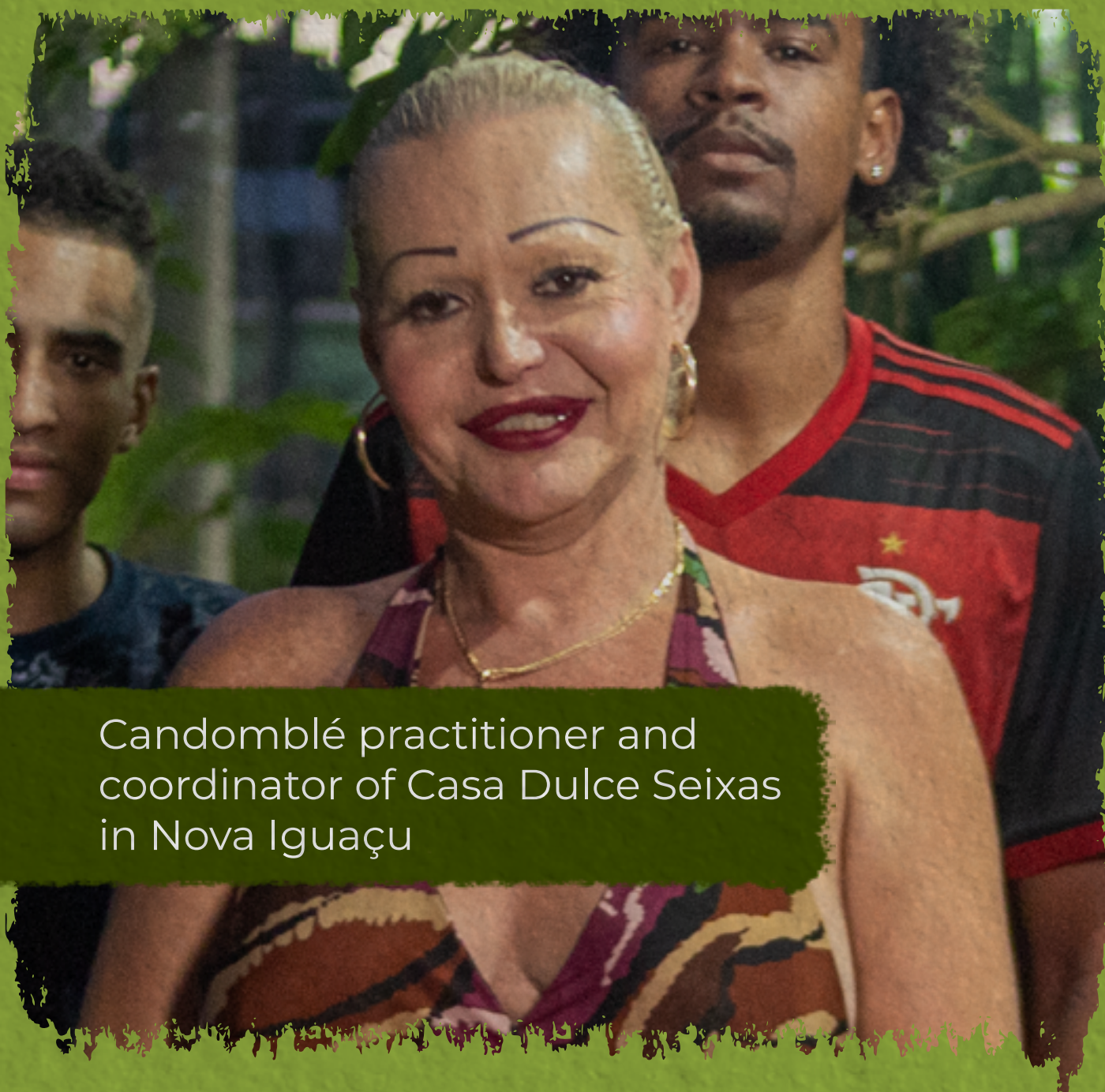
There is a deep ancestral and historical connection between this population and the quilombo territory and mangroves. However, despite being certified as a quilombo remnant by the Fundação Cultural Palmares in 2018, a part of the community itself still does not identify as quilombola. There is a conflict of identity, often related to religious reasons.

In parallel to these difficulties, the work of Quilombo do Feital continues, with efforts to redefine the territory they inhabit through the revival of quilombola culture and traditions, such as craftsmanship, fishing, and crab picking.

*“We are working to ensure that our Black population is valued and respected. We urge those who hold the power to enact change in these communities, which are often marginalized within society, because we are deeply affected by environmental racism.”*



# SHIRLEY MARIA



Candomblé practitioner and coordinator of Casa Dulce Seixas in Nova Iguaçu

## NOVA IGUAÇU

For the fourteenth consecutive year, Brazil remains at the top of the global ranking of countries with the highest rates of violence against transsexual and crossdresser populations. According to the latest annual report by the National Association of Transvestites and Transsexuals (Antra), there were 131 homicides in 2022, with the majority of victims being between 18 and 29 years old.

Currently, the life expectancy for trans individuals in our country is 35 years. Contrary to these statistics, we learn about Shirley's journey, a 47-year-old who coordinates Casa Dulce Seixas in Nova Iguaçu. Known as the only welcoming center in Baixada Fluminense, the space stands as an oasis of resistance against climate injustices and is constantly in the crosshairs of environmental racism in the region.

Shirley reflects on how the lack of sufficient data on the topic itself serves as a warning of how the LGBTQIA+ population is rendered invisible in several agendas and spheres of power. When considering the impact of climate change on the community, the invisibility of evidence regarding socio-environmental violations at local, national, and international levels becomes even more pronounced.

## A THREAT TO LGBTQIA+ WELCOMING SPACE IN NOVA IGUAÇU

Besides being an overcrowded welcoming center, directly affected by floods, heat, power outages, and water contamination, the same property that divides the space houses a Candomblé center, where the connection between the environment and faith takes on new meanings.

*In drumming circles, it's common for someone to feel unwell due to the heat. The ritual hall gets really hot. People sweat due to the energy of the ritual, and even more due to the intense heat, and we only have two fans. Blood pressure drops. Human beings are largely responsible for climate change and global warming. The orixás have nothing to do with it."*

The logic of environmental racism can be identified in the lack of urban planning in Nova Iguaçu, the deforested areas, and the closed waterfalls where offerings were once made. Additionally, there are open dumps that attract flies, diseases, odor, and all forms of contamination. Casa Dulce Seixas also faced significant challenges from this year's floods. The electrical system was damaged, infiltrations seeped into the walls, and garbage clogged the plumbing.

*"Here, the water causes stomachaches and diarrhea due to contamination. We dug an artesian well. The electricity bill is around R\$ 1,100, as we consume much more water and electricity in the summer. We wanted to have a solar panel, our own vegetable garden, and a new cistern to harvest rainwater."*

If the verb "improvise" at Casa Dulce Seixas can be interpreted as an attempt at survival, for both the welcoming center and the terreiro (Candomblé center), the verb "exist" represents the struggle in a country that, if not causing death, denies the right to a place of rest or the dignified practice of faith for the LGBTQIA+ population.



# TEREZA ARAPIUM



Indigenous Leader and one of the founders of Indígena Carioca Collective

## RIO DE JANEIRO

Born in the heart of the Amazon rainforest, in Aldeia Andirá, Tereza belongs to the Arapium ethnicity, native to the region of Arapiuns River, an affluent of the Tapajós River in the Amazon. In her village, she lived with her great-grandmother, who was a midwife, bone mender - repairing the bones of the people in the village - and a great farmer. Her other

great-grandmothers were artisans, and the shaman was the healer of the village. They make a living from cultivating cassava and other roots, collecting forest fruits like açaí, bacaba, and patauá, and working in groups. However, Tereza explains that this way of life is no longer possible due to the increased persecution of indigenous peoples and deforestation in the Amazon rainforest.

Tereza lived in her territory with her people, culture, and beliefs until the age of 12 when she had to move to the city of Santarém to pursue education, influenced by a church built near their village. Leaving the village and living in the city was challenging for her, as her people had little contact with non-indigenous individuals, and the way of life was entirely different.



*When people destroy the forest, they are not just destroying trees but the habitat of forest animals. They destroy the biome, everything. That is why there is this major environmental imbalance from climate change. Environmental devastation disrupts the balance of the world, of the planet."*

## FROM THE AMAZON RAINFOREST TO THE ATLANTIC FOREST: A HISTORY OF STRUGGLE

The indigenous population was the first target of environmental racism when their lands and ways of life were usurped. In addition to the arrival of the church, Tereza explains that the arrival of loggers, mining, and

agribusiness was destroying everything around her village. Rivers were polluted, forests were deforested, hunting was extinguished, and today, with climate change, severe droughts and floods have also arrived.

Despite living in Rio, Tereza has always remained closely connected to her relatives. It was through her village's struggle for land, led by her father Bruno, that she began her journey in indigenous activism, becoming an important leader.



*When I talk about my people, it's not just about my Arapium people, but all my relatives who need me, whom I can help in some way, whether in Rio de Janeiro or wherever I am. My people, my relatives, are my siblings. So, I joined the movement to create the Indígena Carioca Collective here in Rio."*

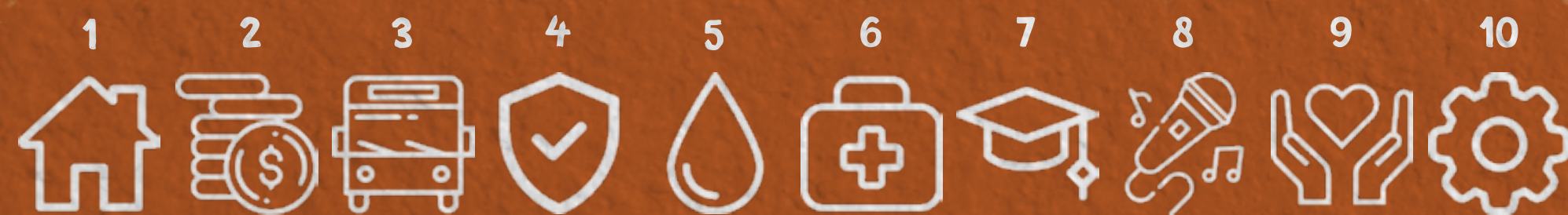
Tereza was one of the founders of Indígena Carioca Collective and one of the organizers of the first March of Indigenous Women, which took place in 2019. She also participates in the Terra Livre Camp, the largest Assembly of Indigenous Peoples and Organizations in Brazil, and the *Levante pela Terra*, an indigenous movement against government initiatives that threaten indigenous peoples. Additionally, Tereza is involved in partisan political movements and is affiliated with the Rede *Sustentabilidade* party.



# SOCIAL & ANCESTRAL TECHNOLOGIES

Social and ancestral technologies are composed of multiple strategies that emerge from a specific social, geographic, and political context, so they are territorialized. However, this doesn't prevent them from being a source of inspiration for other territories.

The experiences of the technologies presented below demonstrate that they are still multidisciplinary, meaning they intersect with issues of housing, health, education, among others. This shows that the struggle for climate justice itself is a multidisciplinary challenge.



**1. Housing; 2. Employment; 3. Transportation; 4. Security; 5. Sanitation; 6. Health; 7. Education; 8. Culture; 9. Social Assistance; 10. Public Management**







## THE MISSION OF AN AFFECTIONATE SUSTAINABLE COMMUNITY KITCHEN IN ITAGUAÍ

### A.M.I.G.A.S - ITAGUAÍ WOMEN'S ASSOCIATION OF WARRIORS AND SOCIAL ARTICULATORS

**Project Mission:** Led by Anna Paula Sales, A.M.I.G.A.S Association presents a proposal for an affectionate sustainable community kitchen along with professional training. Additionally, the project is based on the principles of addressing domestic violence and promoting a solidarity economy.

 **Itaguaí**

**Interview Date:** March 17, 2023

**Key Strategies:** Social mobilization; affectionate community kitchen; professional training.

**Themes:**   

Located approximately 73 kilometers from the state capital of Rio de Janeiro, we find Itaguaí. This municipality located in the Baixada Fluminense region and close to the Costa Verde has a geography characterized by mountains and plains that reveal a deep chasm of social, racial, and economic inequality among its neighborhoods, alleys, and rivers.



## UNDERSTAND THE PROBLEM

As we never deal with inequalities in the singular form, there are many confrontations happening simultaneously in Itaguaí. Besides suffering from the climate crisis, tragic floods, and extreme heat, the municipality is also facing a housing crisis among its riverside population, who live along the stream. With no basic sanitation, the waters of the creek get lost amidst contamination. Just half an hour of rain is all it takes for the entire Engenho neighborhood to be literally submerged in water. And thus, the cycle of losses begins again.

Right at the entrance of the municipality, it is immediately evident that there is no urban planning and no municipal projects for water drainage. The contradiction lies in the fact that the Itaguaí City Hall issues calls for proposals with funds of R\$ 35 million allocated for basic sanitation and drainage. In their financial statement, the money is recorded as spent. The question that Itaguaí's population still cannot answer is: where was this money spent? There is no improvement, no progress. In this context, we spoke with Anna Paula, a community leader representing A.M.I.G.A.S association.



*Last Saturday, it rained and we had to do everything to assist residents who already have lost almost everything - and with every rain, they lose even more. Being poor here in Itaguaí means dying from flooding, losing everything, all the time."*





## TECHNOLOGICAL SOLUTIONS

The A.M.I.G.A.S Association was born during the Covid-19 pandemic as a strategy for a swift response to the scenario of food insecurity that plagued hundreds of families at the time. Facing a scenario of death, hunger, and despair, the project did what the state and federal government of the time chose not to do.

The majority of people assisted by the project are families living below the poverty line, individuals with a history in the prison system, Black youths, women facing domestic violence, and individuals struggling with chemical dependency. In the face of so many violations, the project's headquarters, located in the Engenho neighborhood, strives to be an oasis amidst so much suffering for survival.

In this regard, one of the areas where A.M.I.G.A.S operates is in the distribution of pre-packaged meals in the community - a necessary strategy given the high cost of the cooking gas and the inability of those people to prepare their own meals. The distribution is maintained thanks to resources provided by other partner institutions.

However, beyond the simple distribution of food, the project has developed a true Affectionate Sustainable Community Kitchen. Besides being a supportive kitchen, it has also become a center for entrepreneurship and training in the fields of gastronomy and tourism for those assisted. Some of the students who completed the course were able to secure job opportunities as a result.

Another initiative of the project was the establishment of a community garden and a chicken coop with the initial goal of supplementing the food for the distributed meals. However, both were affected by heavy summer rainfall, temporarily disrupting production.



*No one has money for anything. How many times have we built this garden here, only to rebuild it due to the rains? We are running a campaign to support it with bricks."*

## THE FUTURE IS JUST AROUND THE CORNER: TOWARDS 2030

To achieve climate justice in the future, Anna Paula tells us that the people of Engenho neighborhood need balance. Balance in community development, for the residents, and with the preservation of the environment. All together, working for each other.





## A SURVIVOR'S FILM FOR SURVIVORS

### Visão Coop

**Project Mission:** To organize cooperation networks through social, digital, and green technologies in the Baixada Fluminense.

### Queimados

**Interview Date:** March 28, 2023

**Key Strategies:** Mapping; Citizen Brigade; Audiovisual Production; Climate Education; Manual Production.

**Themes:**     

Visão Coop is a civic laboratory that organizes cooperation networks and works with social, digital, and green technologies in the Baixada Fluminense. According to one of its founders, Fabrícia Sterce, the laboratory began to address the issue of **climate justice** based on a demand from the territory.



## UNDERSTAND THE PROBLEM

Queimados is the blackest city in the metropolis. Located in Baixada Fluminense, the municipality suffers from recurrent episodes of rain due to lack of basic sanitation and care for the city's rivers. According to Visão Coop, the most affected areas are the neighborhoods of Santa Rosa and Piabas, where the majority of residents are poor, black women and single mothers. These families are victimized in several ways.

There are physical health damages – **due to skin diseases and gastrointestinal infections** – and mental health impacts, due to **climate anxiety** affecting these populations. In addition to recurring material losses. People even give up furnishing their homes.

Starting from the rains of 2020, after enduring consecutive episodes of floods and the consequent inundation of the city, the members of Visão Coop realized that this was not an isolated event and that they needed to do something. Frustrated by the negligence and lack of response from the government, the team began to mobilize so that the population itself could protect and assist each other during intense rain events.

## TECHNOLOGICAL SOLUTIONS

*Visão Coop* has started to use several strategies to address the problem, such as organizing a flood response brigade using tools like Excel, WhatsApp, and Facebook to identify the affected families, their locations, and thus develop action strategies, such as rescuing people, cleaning houses, and distributing food, for example.

The goal is to show residents that floods are not natural events, the blame is not on the rain, but rather they are related to the lack of basic sanitation and urban infrastructure.







*Even with the response brigade that we were conducting in the community, we are also consistently engaging with the government, presenting the data we collected, how many families were assisted, and holding them accountable.”*

Based on the brigade’s experience, the group created a **manual called “How to Combat Floods: Before and After,”** where they explain the necessary steps for the community to respond in the face of government neglect, such as: **organizing emergency efforts, mapping vulnerability locations and locating families, providing donations and support for home cleaning.** The manual aims to share with other territories facing similar problems the knowledge acquired on how to act in emergency situations caused by floods.

Another approach was the **production of a film** titled “Como Sobreviver ao Racismo Ambiental” (How to Survive Environmental Racism), which addresses cases in the Baixada Fluminense such as forest fires, floods, and soil and water contamination. This is a way to document the challenges these individuals face and how they survive the consequences of environmental racism, highlighting strategies such as home adaptation projects, reforestation of urban forests and riparian areas, and the use of eucalyptus for soil decontamination.

Fabília Sterce, the film’s director, believes in the potential for exchange that an audiovisual product offers by presenting alternative perspectives to the audience. Producing a film was the strategy the team chose to ensure that **Baixada would be seen and heard** through the voices of people who have long been marginalized. Visão Coop’s goal is to organize a **film circuit for the film** in the Baixada Fluminense.



*We are immortalizing these stories, preserving the narratives of people who have been suffering not just yesterday or today, but for many years, and who deserve to have their voices enshrined in this film.”*

## THE FUTURE IS JUST AROUND THE CORNER: TOWARDS 2030

Visão Coop believes that it is not possible to dissociate racism from all these problems; it is the primary cause of all of them, as it dehumanizes the Black population. Therefore, to begin transforming this reality of human degradation, it is necessary, first and foremost, for the government to see these individuals as the human beings they are. For the group, addressing climate issues necessarily involves confronting social inequalities.





# THE 1ST CLIMATE FORUM OF BAIXADA FLUMINENSE



## Magé Climate Forum

**Project Mission:** To popularize climate discussions by empowering existing organizations in Magé.

 **Magé**

**Interview Date:** March 29, 2023

**Key Strategies:** mapping of local organizations; political advocacy

**Themes:**    

The Climate Forum of Magé (FOMA) was created from the desire to discuss the climate issue within the territory of Magé based on an experience of crisis that the project's creators themselves went through. William Jefferson, a member of the quilombola community and one of the initiators, shared that at the end of the year 2020, floods caused by heavy rains affected hundreds of people, leading to their homes being flooded amid the coronavirus pandemic.



The most critical situation was in the neighborhood of Buraco da Onça, situated between a hill and a river. There, people lost everything, as on one side the river level was rising, and on the other, the embankment was collapsing. William and Anderson Ribeiro, another representative of FOMA, were involved in distributing food baskets and preparing meals.

Even after experiencing previous flood incidents, William and Anderson noticed that these events were becoming more frequent and intense. It was at this point that they decided to join forces with Carla Lubanco, another initiator of FOMA, who had been thinking of something to promote climate discussions in Magé. From that moment onwards, FOMA was born, and today its core consists of six young individuals historically engaged in environmental issues in Magé. Among them, four are women, three of whom are Black, and two are men, one from a quilombola community and the other from an indigenous background. The forum now receives support from an additional 14 volunteers.

## UNDERSTAND THE PROBLEM

Magé is a city in Baixada Fluminense located between the Guanabara Bay and the Serra dos Órgãos National Park, where a portion of its protected area is within the municipality. This geographical context is responsible for Magé being crossed by many rivers that originate in the Serra dos Órgãos and flow into the bay.

According to William, the main factor contributing to Magé's environmental and climatic issues is the lack of qualified technical management of the city's watercourses by the government, which also fails to raise awareness among the population about the importance of river preservation.

Due to neglect, most of the city's rivers are silted up, and some have even been filled in. The consequence of this is flooding during rainy periods,





where river levels rise and flood streets and homes, causing destruction and spreading diseases among vulnerable populations, such as leptospirosis, a disease that can lead to death. The heavy rainfall and floods also impact family farming, which is prevalent in the city. With the climate crisis, farmers deal with unpredictability and recurrent crop losses.

Fishermen and shellfish gatherers in Magé also face challenges, including mangrove pollution and the advancing tides that are encroaching on mangrove areas. This is particularly serious due to the ecological importance of mangroves as breeding and refuge areas for numerous marine species. Preserving these areas is not only about ensuring the livelihoods of fishermen and shellfish gatherers but also about safeguarding the biodiversity of marine life.

*I think the issue of environmental racism needs to be addressed in this city. And it is a grassroots problem. How do we solve **environmental racism** if we don't even have anti-racist individuals in positions of power in the government?*

## TECHNOLOGICAL SOLUTIONS

FOMA serves as a unifying agent for the initiatives existing in Magé. Out of the 26 organizations mapped in the city, around 20 took part in the forum's inaugural meeting. All of them had representatives addressing climate issues and denouncing structural racism, which denies the inheritance rights of non-white populations when they are the ones consistently losing their homes and belongings. The event also had the presence of lawmakers and experts in the field.

The discussions, ideas, and shared demands in the forum were compiled into a Manifesto Letter that presents a set of proposed public policies for the city across different areas. This letter was presented at the Municipal Environmental Conference and, after unanimous voting, forwarded to the Environmental Council. FOMA also took part in the launch of the Parliamentary Front for Climate Justice in the ALERJ (State Legislative Assembly of Rio de Janeiro), which aims to promote climate policies for the state of Rio de Janeiro.

*The main idea is to multiply the knowledge we have gained and are acquiring with people. We want to reach as many people as possible and make the debate popular.*

## THE FUTURE IS JUST AROUND THE CORNER: TOWARDS 2030

By 2030, the founders of FOMA aim to expand the forum's reach, foster climate discussions in other territories and schools, in order to raise awareness among future generations as well.





## CULTURAL OCCUPATION AND RESISTANCE IN REALENGO



### Realengo 2030 Agenda

**Project Mission:** To advocate for the construction of Parque Realengo Verde based on the demands of the local community.

 **Realengo**

**Interview Date:** April 4, 2023

**Estratégias-chave:** Local public policy agenda; public policy course; cultural activities; occupation; territorial mapping; heat map.

**Themes:**    

For decades, residents have been fighting for the transformation of an abandoned area in the center of Realengo, where a deactivated cartridge factory was located in 1978, into an ecological area. In 2019, residents organized a collective cleaning effort in part of this area which, like the rest, had been abandoned and had become a dumping ground for debris. With the cleaning of the land, they began occupying the space through cultural, political, and recreational activities.



## UNDERSTAND THE PROBLEM

Realengo is a low-income neighborhood located in the Western of Rio de Janeiro. It is the fourth most populous neighborhood in the city and faces significant challenges during periods of high temperatures. This is due to its urban density, limited presence of green spaces, and its natural tendency to become hotter based on its geographic context. Realengo is situated in a valley between the Pedra Branca Massif, Gericinó Massif, and Serra do Mendanha mountain ranges, which hinders air circulation.

The neighborhood is also recognized for its military and industrial history from the previous century. As a legacy of this past, Realengo has been experiencing what its residents refer to as military-real estate speculation, as many plots of land in the area belong to the military. While the movement for the Parque Verde advocates for a public, ecological, and green space, there is a counter-movement promoting the construction of more buildings and condominiums in the region, favoring a few at the expense of many.

In the past few months, the Parquinho Verde Occupation area was demolished by the city authorities along with the businesses situated around the park, in order to begin the construction of the new Realengo Park, leaving several families without their source of income and without any compensation. Marcele Oliveira, one of the creators of the **Realengo 2030 Agenda**, emphasizes that residents complain about not being heard by the city hall in the construction of the new park – whose project aims to occupy only 54% of the land – and they fear that instead of being an ecological, green, and accessible place, it will turn into a concrete space for concerts and events.

Currently, what was being built as a potential and dreamed space by the residents has turned into a construction site, dark, devoid of greenery, and lifeless.





*When you think about putting a large park in the center of a neighborhood that is already full of people, extremely hot, facing numerous challenges, and you suggest that the best thing that place can have is a large Singapore tree for tourism, you clearly don't understand anything, you haven't spent a single day here."*

## TECHNOLOGICAL SOLUTIONS

The Realengo 2030 Agenda is the result of the movement for the Parque de Realengo Verde, which took part in a crowdfunding process that enabled the Festival Avante Parquinho Verde, as well as a series of improvements in the area.

From then on, the wasteland turned into the Parquinho Verde Occupation, a green area for community interaction among residents. It featured a garden that produced fruits, vegetables, and unconventional food plants (PANCs) for harvesting, a composter, green roofs, and rainwater redirection. It was a place where people could gather to exchange knowledge, talk, and envision possibilities for a sustainable city together.

The Agenda is also built upon the Realengo **Public Policy Course**, which took place within the Parquinho Verde area. The activities involved the participation of about 40 leaders, not only from Realengo but also from other neighborhoods in the Western Side.

In addition to the classes, the course included a series of participatory activities to allow people to express their ideas, dreams, and desires for Realengo. After the course, there was a **process of organizing these proposals** carried out by a multidisciplinary team. The group also conducted various **mappings of the territory**, including housing, the location of squares, local initiatives, and actions, as well as a **heat map**, all of which confirm the effectiveness of green areas in reducing temperatures and promoting quality of life for its residents.

The Realengo 2030 Agenda has developed proposals for public policies for the region, focusing on Socio-Environmental Justice, Housing, Quality of Life, Culture and Territoriality, and Social Participation.

*The Parquinho Verde Occupation, through culture, enabled us to mobilize many people around the idea that climate change is a matter for today, it is an urgent issue that requires our participation."*



## THE FUTURE IS JUST AROUND THE CORNER: TOWARDS 2030

One of the creators of the Realengo 2030 Agenda, Marcele Oliveira, believes that in order to overcome military-real estate speculation, this movement of constructing private condominiums for profit making, it is necessary to engage with the territory's memory as a political strategy to reclaim the desired neighborhood.





## COLLECTIVE DOULA SUPPORT AT THE ITAOCA DUMPING GROUND



### Espaço Gaia

**Project Mission:** To fight against environmental racism, ensure food security, and reproductive rights for the women of the Itaoça Dumping Ground.

### Itaoça

**Interview Date:** April 6, 2023

**Key Strategies:** Doula support; talking circles; green spaces; rainwater harvesting.

**Themes:**   

Espaço Gaia was envisioned by doula and activist for sexual and reproductive rights, Laura Torres, who has been working with the women from the former Itaoça Dumping Ground for two years. Her initial goal of combating obstetric violence through talking circles expanded as she confronted the reality experienced by the residents. In her interactions with these women, Laura understood that environmental racism is one of the cruelest aspects of obstetric violence, from prenatal to postpartum.



In addition to the boundaries of motherhood, the environmental racism that targets women and prevents them, for example, from experiencing the stages of motherhood with dignity, can and should be seen as obstetric violence. The lack of basic sanitation, the lack of access to clean water, and episodes of flooding significantly impact the lives of pregnant women, postpartum women, and babies, as they amplify the risk of contamination, homelessness, and even hinder personal hygiene practices.

## UNDERSTAND THE PROBLEM

Located in the municipality of São Gonçalo, the Itaoca Dumping Ground was deactivated in 2012, leaving a significant number of waste pickers who resided there without support and losing their source of income. The families that still live in Itaoca reside in wooden shacks without basic sanitation, amidst ditches and soil contamination due to the dumping ground's activity.

The population, which is predominantly composed of poor, Black individuals who still make a living through recycling, has been suffering from a lack of access to water for over eight years. In the area, there is only an unauthorized water source where women need to fetch water. Laura reported that she has even seen people filtering leachate to wash clothes, for example. There was a major construction project for water pipelines, but they were never activated.



*Many of the girls underwent cesarean sections. How to take responsibility for a high-risk surgery in a place that is very hot, very dirty, and lacks water?"*





Regarding electric power, due to the high cost of cooking gas, many families in Itaoca are resorting to using firewood for cooking, going back more than two centuries when firewood was the main energy source in the country.

Other serious problems in Itaoca include extreme heat and floods caused by intense rainfall. These problems are exacerbated by the fact that Itaoca is surrounded by mountains, hindering the circulation of wind and serving as a convergence point for water flowing toward Guanabara Bay. These events are becoming increasingly worse and are affecting women and mothers in a more severe manner.

## TECHNOLOGICAL SOLUTIONS

The reality faced by the women of Itaoca is one of extreme vulnerability and rights violations. In this context, the work that Espaço Gaia is doing with these women represents a true collective doula action. The project provides support throughout the entire pregnancy and postpartum periods, offering the necessary assistance for both mothers and babies, including organizing collective baby showers.

Espaço Gaia also carries out some emergency actions for the distribution of water and cooking gas, in addition to developing projects for the creation of green spaces with the aim of mitigating the impacts of heat and providing areas for social interaction. They are also collaborating with the startup Águas Resilientes to implement rainwater harvesting systems to ensure access to water.




*When we think about climate justice, we consider their lack of access to water and how it increases the risk of contamination, which affects pregnancy and the well-being of the baby inside."*

## THE FUTURE IS JUST AROUND THE CORNER: TOWARDS 2030

For the future, Laura doesn't want to speak on behalf of the women of Itaoca. She fights for these women to understand their rights and, in doing so, be able to empower themselves - both sexually and financially. And then, they can become representatives of their own stories, experiences, and realities in Itaoca.







## THE POWER OF SOCIAL TRANSFORMATION THROUGH BICYCLES IN QUEIMADOS

### Pedala Queimados

**Missão do projeto:** To encourage social transformation through bicycles, with a focus on generating employment and income, reducing inequalities, and promoting citizenship.

 **Queimados**

**Interview Date:** April 8, 2023

**Estratégias-chave:** Income generation; active and inclusive mobility; reduction of inequalities; production of bamboo bicycles.

**Themes:**  

For some of us, learning to ride a bicycle involves various nostalgic memories from childhood and adolescence. However, Carlos Grebike only learned to ride as an adult - and in quite an unexpected way. While he was working as a candy vendor, a lady from the South of Rio de Janeiro offered to donate a bike and asked if he knew how to ride it. "I will learn, auntie," he thought. What he did not know was that this incident marked the beginning of a social transformation that was about to happen in Queimados, "the city that suffered the most before becoming the most violent" in the Metropolitan Region of Rio de Janeiro.



The NGO Pedala Queimados was born precisely to empower the local population in the fight against social and racial oppressions and violence. This struggle takes place mainly through actions aimed at breaking down the barriers of urban mobility in Rio, advocating for quality bike lanes and claiming for cycling to be included in the priorities on the public transportation agenda. Thus, the organization was founded to engage in **political advocacy** for **income generation, social equity, reduction of inequalities, and promotion of citizenship through the use of bicycles.**

## UNDERSTAND THE PROBLEM

There is a point that precedes the fight for quality and affordable public transportation for the poor and Black population. There's a fight for existence. This alerts us that beyond the need to promote sustainable mobility in territories that have been made vulnerable by poverty, violence, and inequality, we must take into account privileges and opportunities.



*During the pandemic, food baskets were distributed by bicycle. In a flood situation, if you are in a car, you are stuck. It is the end of your car. But with a bicycle, you can push it and pass through the way. Even for that, it is essential. We just need public officials to perceive it as a social transformation, not as a sport."*

One of the aspects of environmental racism is that the lack of road safety and public security are interconnected. In marginalized areas, the infrastructure and urban planning do not accommodate cyclists. When this problem is not fatal, it exacerbates inequalities by raising further **barriers to access and the right to move around the city.**





## TECHNOLOGICAL SOLUTIONS

Faced with the urban mobility problem, among many others, Carlos Greenbike conceived a bamboo bicycle workshop, which not only looks stylish but it is also highly durable for long distances. As a social technology, the assembly of sustainable bikes takes place collectively.

This strategic initiative led to numerous training workshops, primarily involving Black and low-income youth from Queimados, introducing them to bicycle technology. After all, who is the culture of biking for, and who should it be for? And as long as the city does not accommodate this growth in bicycle usage, technology will be constrained by the geography of an exclusionary and racist urban planning.

*I no longer need to have R\$ 7.40 to be able to get to Rio de Janeiro by bus or van, you know. Before, I used to depend on that. If I didn't have R\$ 200, I couldn't get to São Paulo. But today, I can. I have made it, even without having the money."*

## THE FUTURE IS JUST AROUND THE CORNER: TOWARDS 2030

Strengthening regional tourism as a public policy is an ambitious strategy. The benefits extend not only to health but also to income generation and the appreciation of what exists in the Queimados territory. Environmental racism goes beyond the distances that need to be explored by bicycle; it also manifests in the barriers faced when men and women, workers, and cyclists resist in their identities to generate income, promote access, and inclusion in the city's opportunities.

In Queimados, neighborhoods like Parque Ipanema, Santo Exedito, Parque Industrial, and Santa Rosa have very little attention from the government. Partly because there are no city council members representing these low-income areas, nor any community leaders aligned with the municipality or representatives from the Executive branch. While 2030 does not arrive, the population of Queimados continues its struggle. "Struggling to exist in the sense of being seen, being remembered, being placed and included within public policies, sustainable development plans, and state and government projects."







## GREEN ROOFS TO COMBAT HEAT ISLANDS

### Teto Verde Favela (Green Roof Favela)

**Project Mission:** To drive the adoption of green roof technology in Rio de Janeiro's favelas to mitigate house temperatures.

 **Parque do Arará, Benfica**

**Interview Date:** April 12, 2023

**Key Strategies:** Climate adaptation; mitigation; green areas; reduced electricity usage; income generation.

**Themes:**   

If heat waves impact cities, it is essential to always remember that the same impact in favelas and low-income areas can be even worse. This is what Luiz “Sanduba” Cassiano, as he is known in Parque do Arará, shared about the development of the **social technology** of **green roofs**. A true garden cultivated on rooftops. An architecture that strategically combines various plant species with two key purposes: house **adaptation** and heat **mitigation**.



## UNDERSTAND THE PROBLEM

The vulnerability experienced in the favelas is a sensitive issue that involves **energy justice** and the problem of environmental racism. This is because, in the face of absence and neglect from the government, other absences come into play in favelas. The high cost of energy intensifies a scenario of energy poverty, where families must make difficult choices between investing in food versus paying the electricity bill.

And the hotter it gets in the summer (and other seasons), the more the residents of Parque Arará need to invest in fans, air conditioning, and alternatives that help alleviate the intense sensation of being literally inside a greenhouse. In the favela, you can find some green roofs created by Casiano's hands.



*The green roof is so powerful that it's also bulletproof in case of gunfire, which is a common reality in the favelas of Rio de Janeiro."*

Furthermore, the absence of green in Rio de Janeiro's favelas reveals yet another layer of environmental racism, which deprives these populations of closer contact with nature. The lack of trees consequently leads to regions without shade, intensifying heat and bringing discomfort and harm to physical and mental health.





## TECHNOLOGICAL AND ANCESTRAL SOLUTIONS

Designed to have a dual purpose – cooling in the summer and warming in the winter – the **green roof** was a revolutionary green technology that inspired Cassiano to replicate it in other houses, bus stops, and favelas of Rio, as well as share this knowledge so that others could learn. His affectionate relationship, care, and cultivation with plants transform into a **mitigation strategy**. The sustainable aesthetic, resembling a garden, **reduces noise pollution**, acts as a natural air conditioner, thereby **reducing energy usage**, and also serves as a heater.

And mistaken are those who think that the moisture responsible for nurturing green technology attracts mosquitoes, insects, or causes mold in homes. This is a misconception. Ecosystems develop and adapt to the architecture of the green roof. All of this comes at a low cost: R\$ 200-250 per square meter. The technique, which combines medicinal and nutritious plants and roots, can even be done under an old mattress; the most important thing is that the filaments are strong enough to support the plants. Composed of a geotextile fabric made of “bidim” (commonly known as “bidim”), which prevents the loss of substrate and nutrients for plant maintenance.



*With the green roof, it's possible to improve your home's quality of life and change the energy a bit. Because there are medicinal – and powerful – plants here that provide a kind of protection to the house. We need to see that a home should be like a nest, not a cage from which you need to escape.”*

## THE FUTURE IS JUST AROUND THE CORNER: TOWARDS 2030

The technology, which modestly began as ecological infrastructure in 2014, is now one of Cassiano's sources of income. For him, the current challenge is how to monetize the service in an accessible and inclusive way for the residents of Parque Arará and other favelas. Considering that it is a green, social, and ancestral “makeshift solution,” the ambition is for its **replication in other communities to become a public policy for climate adaptation and mitigation**. Fighting for green spaces in favelas is an act of resistance, as even this right has been denied to us.





## A PUBLIC POLICIES AGENDA IN RIO DAS PEDRAS



### Rio das Pedras Agenda

**Project Mission:** To develop proposals for public policies through citizen-generated data to ensure social justice in low-income territories.

 **Rio das Pedras, Rio de Janeiro**

**Interview Date:** April 14, 2023

**Key Strategies:** Local agenda for public policies; social mobilization; political advocacy; environmental education.

**Themes:**    

Rio das Pedras is a favela in the West of Rio de Janeiro, which began to be settled in the 1950s and has now become the third largest favela in Brazil. According to IBGE (2023), the favela has more than 27,000 dwellings and, according to the “*Justiça Hídrica e Energética nas Favelas*” (Water and Energy Justice in the Favelas) research, it has 160,000 inhabitants. The majority of residents are migrants from northeastern Brazil, drawn by job opportunities in the Barra da Tijuca region during its construction process.



## UNDERSTAND THE PROBLEM

Parallel to the construction of Barra da Tijuca, these newly arrived migrants needed a place to live, and that is how Rio das Pedras emerged, in a swampy area between Tijuca Massif and the Jacarepaguá lagoon complex. It is worth emphasizing that this construction was not accompanied by basic infrastructure and public policies, resulting in serious historical problems related to sanitation, flooding, housing, and urban mobility.

In addition to the frequent floods, which occur even without rain due to tidal dynamics, the soil in Rio das Pedras has a low capacity to support the weight of the increasingly vertical housing structures, contributing to the sinking of homes and buildings in the community. All of these events together naturally lead to traumas in the population due to chronic fear of material losses or even loss of family members. As these problems are amplified by the climate crisis, the number of people with traumas and psychological disorders will increase.

After enduring numerous losses, the population starts developing strategies to cope with or mitigate some of the issues, whether by raising the height of their houses above ground level, placing material possessions in the highest parts of their homes, or even mobilizing to draw the attention of the authorities.

Érika Alves, a resident and one of the individuals responsible for Rio das Pedras Agenda, tells us that the agenda is one such initiative. Created by women, residents, and former residents of the favela, the agenda has become an incredibly important tool for bringing people of all ages, from social and public institutions, to collectively brainstorm solutions to minimize the problems faced in the area.







*I get worried when I see that the weather is changing. I worry about how I will get to Rio das Pedras, how I will commute to work, how my child will get to school, and I worry about people I know who live in lower areas.”*



*I deeply admire the women and the people who live in the favelas because we experience a series of rights violations from the moment we get out of bed. So, we’re constantly being denied our rights. And it’s very simple. And we’re the majority, we can’t just stand still, we need to mobilize, gather people, and change this reality.”*

## TECHNOLOGICAL SOLUTIONS

Rio das Pedras Agenda is being developed through a collective effort aimed at conducting diagnostics and proposing public policies that consider the residents’ demands. Through education, research, and communication, the group’s aspiration is to become a social organization of reference in **citizen-generated data** and **political advocacy** through **active listening**, creation, and **strengthening of networks**, democratization of territorial data, organizational sustainability, and local culture appreciation.

The project also aims to address the challenges of the territory in a more robust manner. This led to the idea of conducting workshops through **itinerant sessions** in the community, combining environmental education with a sense of belonging.

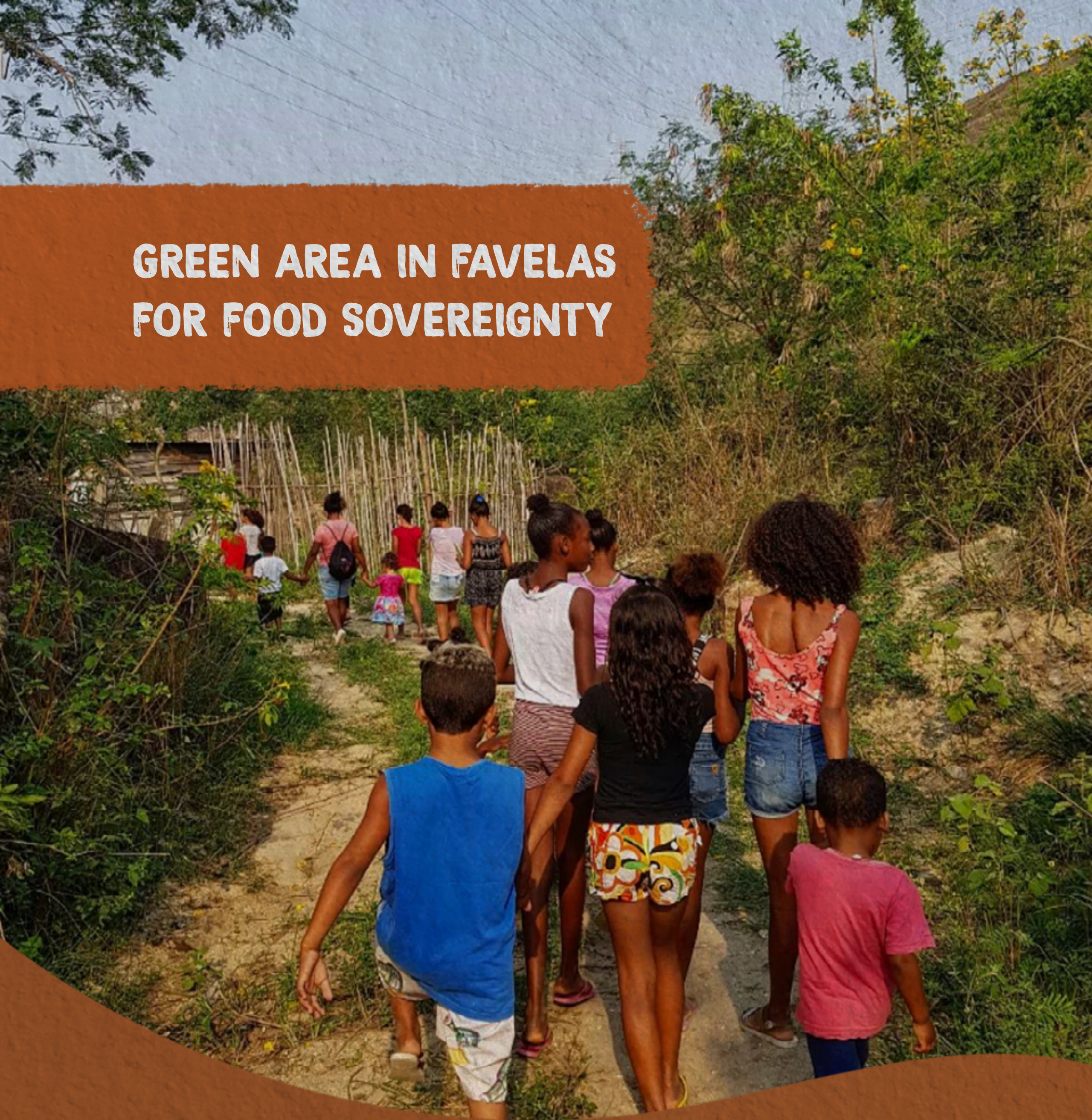
## THE FUTURE IS JUST AROUND THE CORNER: TOWARDS 2030

Regarding the future, Erika dreams and will continue to fight for an urbanized favela, with all its sewage collected and treated in a sewage treatment plant, families having access to a quality water supply network, forestation surrounding the main river in the favela, and well-maintained recreational areas for children to play.





## GREEN AREA IN FAVELAS FOR FOOD SOVEREIGNTY



### Serra da Misericórdia Integration Center

**Project Mission:** To put into practice ancestral technologies in Serra da Misericórdia under the axes of education, citizenship, and communication for the promotion of food sovereignty.

 **Serra da Misericórdia, Penha**

**Interview Date:** April 14, 2023

**Key Strategies:** Climate education; food sovereignty; knowledge revival; bioconstruction; rainwater harvesting.

**Themes:**     

Among the trees, fruits, species, and sounds of the Atlantic Forest in the North of Rio de Janeiro, there is a rocky massif called Serra da Misericórdia. A **green area of 14 favelas** - yes! - that resists the statistics of the low income communities and favelas in the metropolitan region. It is there that you will find the Serra da Misericórdia Integration Center, led by Ana Santos, a Black woman, environmentalist, and mother, who is committed with heart, soul, and intellect to food sovereignty among the families in the region.





*A Black woman is born an environmentalist. We are born defending life, subsistence. The mission here is to empower women through food sovereignty.”*

## UNDERSTAND THE PROBLEM

As Ana stated, hunger is the first loss of dignity experienced in the favela. Who can think of strategies when hungry? Who has the energy and vitality to fight when their stomach is aching due to lack of food? No one. Therefore, in the face of the absence of public policies that ensure food sovereignty in Complexo da Penha, the project has worked to revalue what has always been denied.

Furthermore, in a city undergoing a process of urbanization, even within favelas, the constant cycle of construction and demolition often leads to the loss of at least one tree. Thus, the motto “preserve the forest” has become a political, generational, and ancestral struggle against the State.

## TECHNOLOGICAL SOLUTIONS

In the pursuit of reclaiming ancestral knowledge, the efforts of the Serra da Misericórdia Integration Center focused on two axes of training and development of **ancestral technologies**. First, there are **“quintal” gatherings**, which are talking circles organized with 50 families to discuss food sovereignty using words and resources that resonate with the people in the community. Second, there is the **Escola Popular Agroecológica** (Popular Agroecological School), which taught children and mothers how to plant and understand that nature follows a cycle. Abundant harvests can be re-





aped from what is planted using the knowledge left by our ancestors as teachings, tools, and emergency technologies for those who are hungry.

Throughout the conversation, we learned about other terms and strategies employed by the project.

**“Technology of the forest”:** This involves closely observing the territory, identifying the most urgent needs (what is surplus, what is lacking in the land), and finding solutions. To achieve this, families, especially women, became seed keepers to ensure food sovereignty.

**“Bioconstruction and agroecology saved us”:** In terms of numbers, the Center produced about 80 kilograms of sweet potatoes, 15 chicken eggs per day, one kilogram of tilapia per month, as well as bananas, pineapples, and pumpkins. Additionally, they successfully produced green jackfruit.

**“Rainwater harvesting”:** Rain can be both an adversary and an ally when considering ancestral practices. For example, the challenge of planting on a contour line on the hillside is crucial to withstand the force of water without damaging the crops. On the other hand, there are times when the favela goes without water for weeks, which is detrimental not only to the crops but also to the basic water needs of families.

**“Feminist economics”:** This involves the exchange of one fruit for another among women using a social currency within the favela to promote a circular economy. The sale of pumpkins to obtain tomatoes is a good example of an ancestral survival and nutrition technology.



*There is a lot of pain in family farming. How do I transform my knowledge? We are not just the base of the pyramid, we are the foundation for building a better world. By 2030, we want to see urban agriculture thriving in the favela.”*

## THE FUTURE IS JUST AROUND THE CORNER: TOWARDS 2030

Despite the public neglect of Serra da Misericórdia, it is undeniably the lung of the North of Rio de Janeiro. “The last breath of the Atlantic Forest.” And agroecology is a strong ally in its maintenance and preservation. However, environmental racism poses a threat to the legacy that the project is building. This threat arises from both the presence of polluting companies and the racial geography of its locations. Just a few meters away, children and families live amidst garbage and heavy weaponry, very close to the quarry. The favela is also a city, but with its own specificities. Climate change presented an opportunity for behavioral change in the Serra da Misericórdia. But without public policies and education for poor, Black residents of favelas, we won’t get anywhere.







## PATHS OF RESISTANCE AGAINST THE STEEL MILL IN SANTA CRUZ

### Martha Trindade Collective

**Project mission:** To address health, environment, and urban issues through a collective led by the youth of Santa Cruz, Western of Rio de Janeiro.

 **Santa Cruz**

**Interview date:** April 14, 2023

**Key strategies:** Mobilization; environmental education; air quality monitoring.

**Themes:**  

As every struggle is generational, the Martha Trindade Collective has emerged to carry on the political fight experienced by the residents of Santa Cruz. A neighborhood with various climate adversaries - the biggest being the Ternium Brasil (formerly known as TKCSA) steel mill, which since its establishment, has been responsible for a series of socio-environmental and territorial rights violations.



It was precisely an emblematic episode of violation that gave the collective its name. Dona Martha Trindade was the first resident to denounce the damages and health issues caused by the company in Santa Cruz. As a Black woman, she faced numerous respiratory problems after the steel mill arrived in 2006, and unfortunately, her health did not resist.

## UNDERSTAND THE PROBLEM

Among the various manifestations of environmental racism, the racial geography that guides the mapping of industrial complexes is not accidental. Therefore, harmful industries located in predominantly Black neighborhoods would not be a mere coincidence. Considering the high emissions of greenhouse gases (GHGs) and the imminent risks faced by those living around Ternium, the population of Santa Cruz has already noticed numerous small and significant signs of environmental injustices. Aline Marins from the Martha Trindade Collective explains:



*The sky over Santa Cruz turns orange at night. We can smell a strong sulfur odor, not to mention the risks of explosions, noise pollution, high rates of lung cancer, respiratory problems, dermatological issues, hair loss, and long-term illnesses. Even the fruit from the trees feels it.”*

The intersections become even more visible when we look at the issue of **water justice**. Like any industrial complex, the company literally uses tons of water to operate. Here we encounter another socio-environmental contradiction: **water is never lacking for the steel mill, but it is always scarce**





**residents.** Furthermore, since the arrival of Ternium, the unemployment rate in the region has decreased, as the demand for labor, which is also exposed to the same risks of socio-environmental violations, has increased. This leads to a toxic dependency: Black, poor, and low-income residents need to work and ensure family income in a place that harms the workers, laborers, and inhabitants of Santa Cruz.

Lastly, heat waves are constant occurrences in Santa Cruz, and torrential rain lead to changes in land use, impacting food production and causing the gradual death of fish in Baía de Sepetiba, which cannot thrive due to pollution and water temperature. All these violations are interconnected!

## TECHNOLOGICAL SOLUTIONS

Considering that the data sent to the reports of the State Environmental Institute (Inea) is provided by the company itself, residents began to question how they could trust these numbers.

To generate evidence from the root of the problem, in 2016, Fiocruz devised a methodology and taught members of the Martha Trindade Collective how to **operate air quality monitors**, so that the indices could be officially recorded by the sensors.

Unfortunately, it was a particular monitoring effort due to the lack of funding to continue. They received a grant of R\$ 200 to conduct measurements in homes using an autonomous device. Often, this took four, six, or even twelve hours, but with the end of the funding, they couldn't sustain the monitoring.

Nevertheless, Wanessa Andrade, from the Martha Trindade Collective, has some hope of acquiring another air quality monitor in the near future, either by purchasing or building their own.



*The idea is, by the end of the semester of my doctorate program, to create an air quality monitor using Arduino. Whether I can convince my professor to do this, I don't know. But we have some contacts with people from Pequía de Baixo (MA), and we might be able to acquire devices that show us real-time pollutant levels."*

## THE FUTURE IS JUST AROUND THE CORNER: TOWARDS 2030

The mission of the Martha Trindade Collective is to fight for public policies capable of systematically breaking the cycle of environmental racism in Santa Cruz. For Wanessa, first and foremost, the fight is for the enforcement of environmental legislation in a neighborhood where the state is completely absent. Then, it is necessary to encourage new possibilities for employment and income outside of the steel industry so that Ternium is not the only career option for young people and workers. But the most urgent action of all is the prevention and treatment of the health of families already affected by the presence of the industry. A special health program and care that restores the lost quality of life and achieves historical reparations, especially for the Black population of the Western of Rio de Janeiro. After all, breathing is an imperative matter of life or death.







## SOCIAL MOBILIZATION AND POLITICAL ADVOCACY FOR A LIVING BAY

### Baía Viva Movement

**Project Mission:** Baía Viva is a socio-environmental, cultural, and multiethnic movement that engages in activism, campaigns, and policy proposals for the integrated recovery and restoration of the bays, rivers, and lagoons of the Rio de Janeiro state, the preservation of the Atlantic Forest, and advocacy for the recognition of the rights of indigenous peoples and traditional communities.

### Baía de Guanabara

**Interview Date:** April 18, 2023

**Key Strategies:** Social mobilization, political advocacy, scientific research

**Themes:**   

One of the largest bays in the country, with significant social, economic, and ecological importance in the Metropolitan Region of Rio de Janeiro, the Guanabara Bay watershed is affected by numerous problems due to the disorganized process of coastal development in the state of Rio de Janeiro.



## UNDERSTAND THE PROBLEM

The recurrent discharge of domestic sewage, industrial effluents, oil, and waste from the 17 municipalities in the region contaminates important rivers, now known as “valões,” which eventually flow into the Guanabara Bay, especially during periods of rain. These problems go beyond municipal boundaries, complicating the situation and requiring institutional responses adapted to the scale of the problem.

Sérgio Ricardo, a researcher from Rio Grande do Norte who has been living in Rio since the 1980s, is one of the members of the Baía Viva Movement, directly participating in the **social mobilization** to address some of the existing problems that overlap and amplify year after year.



*We are experiencing what is called a convergence of crises in ecosocialism: an environmental crisis, a water crisis, a health crisis, and a climate emergency. This is not the fault of individuals; it is the fault of a predatory development model that has been in place for centuries.”*

## TECHNOLOGICAL SOLUTIONS

The Baía Viva Movement was born in the 1980s, bringing together activists, researchers, and technicians who work collaboratively to develop campaigns, projects, and studies aimed at the **recovery, restoration, and preservation of the environment in the bay**. They also provide legal and technical support to artisanal fishermen, quilombola communities, indigenous peoples, and family farmers.





Among the group's achievements, the most notable is the effort to create the project for the **Universidade do Mar da Baía de Guanabara (University of the Sea of Guanabara Bay)**. This extension project aims to **provide education, research, and innovation for the sustainable development of the coastal region of the state**. It promotes the blue economy, including fishing, aquaculture, tourism, the environment, and other uses. The project has the support of universities, public agencies, civil society, rural communities, and the fishing sector. It also envisions the creation of two advanced campuses in the Paquetá Archipelago.

All this **potential for scientific production** is essential to gain a deeper understanding of the multiple dimensions that affect the health of Guanabara Bay. And not only its ecosystem but also the population living around it, especially traditional communities such as quilombolas, extractivists, and artisanal fishermen.



*The impact of climate change on Guanabara Bay and other coastal and shoreline ecosystems, such as Sepetiba Bay and Ilha Grande Bay, will directly affect traditional populations."*

These populations have a distinct relationship with their environment, largely due to their dependence on land and water for subsistence activities. However, they often have fewer resources to adapt to environmental changes. Consequently, any shifts in natural cycles are even more severe for these groups who have a direct connection to their environment.

Between the sea and the solid ground lies the mangroves, which are coastal ecosystems of great importance for supporting marine and terrestrial life. Unfortunately, they are greatly affected by the uncontrolled occupation of these areas.

In this context, the Baía Viva Movement has undertaken the ongoing process of developing an **Integrated Environmental Recovery Plan for Guanabara Bay**. This involves hosting conferences and adopting a participatory methodology for monitoring every two years. This ambitious goal aims to construct integrated public policies through social mobilization.

## THE FUTURE IS JUST AROUND THE CORNER: TOWARDS 2030

When asked about their goals for 2030, Sérgio Ricardo envisions a Guanabara Bay similar to his memories from decades ago – clean and teeming with life. He emphasizes that he won't give up his fight until he can swim in the bay's beaches once again.





A photograph of a favela street. In the foreground, a dirt path is covered with red brick rubble. Four people are walking away from the camera: a man in a yellow and black patterned shirt, a man in a grey t-shirt with a blue backpack, a woman in a black dress, and another woman in a black dress. To their left is a wall made of red bricks and grey concrete, some of which is crumbling. In the background, more brick buildings are visible under a clear blue sky.

## COLLECTIVES DEVELOP A POPULAR CHAMBER IN CAXIAS

### Caxias 2030 Agenda

**Project Mission:** To bring together territorial leaders and social movements in the city of Duque de Caxias to identify problems and propose solutions for the municipality.

 **Duque de Caxias**

**Interview Date:** April 22, 2023

**Key Strategies:** Local public policy agenda; popular chamber of territorial leaders; territorial diagnosis; political advocacy.

**Themes:**    

The **Caxias 2030 Agenda** is the result of the collaboration between two organizations that were already active in the municipality. One of them is Movimenta Caxias, a collective of residents that brought together different social movements onto a single platform to analyze the city's problems and brainstorm solutions. The other is the Popular Chamber of Duque de Caxias (Capop), which brings together elected territorial leaders representing the four districts and aims to involve the population in the process of shaping public policies. Together, they have created the Caxias 2030 Agenda with the goal of identifying problems and solutions for the city based on territorial demands.



## UNDERSTAND THE PROBLEM

Despite being one of the wealthiest cities in the Baixada Fluminense, Duque de Caxias presents one of the highest levels of inequality in the Metropolitan Region of Rio de Janeiro. The scenario of contradiction is repeated in other aspects as well. For instance, despite having significant agricultural potential and a plan for food security and nutrition, the municipality fails to ensure food security for a huge number of families who lack access to proper nourishment.

With these contradictions, the institutionalization of environmental racism is evident in the municipality. This reality manifests in various ways beyond hunger, such as basic sanitation. Caxias ranks among the 20 worst cities in the country according to a ranking by the Trata Brasil Institute. There is also the historical context of forced evictions, where numerous families are left homeless and unsupported after their homes are demolished by the government. Additionally, a key issue is the environmental degradation supported by governmental authorities.



*Caxias is a very wealthy city, but with very basic problems. It is a city that has Reduc (Duque de Caxias Refinery), an Industrial Complex, but cannot even provide food for its own residents."*





## TECHNOLOGICAL SOLUTIONS

In the face of this reality, the Agenda Caxias emerged, beginning its development process in early 2022, parallel to the activities of the popular chamber. It involved debates about the city's policy through meetings of civil society, institutions, and territorial groups of popular council members. The outcome of these activities was an in-depth **diagnosis of the territorial challenges** present in the four districts of Caxias. Based on this, a set of **28 proposals for public policies was created, divided into four strategic pillars**: Human Rights and Public Security; Education and Culture; Environment; Sanitation and Urban Development.

Among the proposals related to the latter segment, the need to protect the Quilombo do Bomba stands out. This historical community is threatened by the local government itself with illegal landfill. Other proposals include the reinstatement of Management Councils for Municipal Conservation Units, the restoration of the "Céu" area in São Bento, the implementation of selective waste collection, an end to illegal waste dumping in Xerém and Jardim Gramacho, adjustment of the project to create the Social Rental Program in the municipality, and the development of a project to combat environmental racism, fully funded by budget allocations from the privatization of Cedae (Rio de Janeiro's water and sewage company), with a focus on the most vulnerable areas of the city in basic sanitation projects.

Based on this set of proposals, the Caxias Agenda positions itself as a tool with the **potential for political advocacy** to operate in several areas. One of the impacts achieved by the organization was ensuring that rural producers in the city could market their produce, as a way to advance in the fight against hunger in the municipality. It is believed that through the expansion of family farming, Caxias could not only supply its own population but also that of neighboring cities.



*Through a lot of struggle, we managed to include, for example, rural producers from the city in the National School Food Program (PNAE), even though they didn't have an organic certification. We legalized these individuals from the Terra Prometida Settlement, and now they can sell to the PNAE and contribute to the local economy."*

## THE FUTURE IS JUST AROUND THE CORNER: TOWARDS 2030

What Vítor, one of the leaders contributing to the Caxias Agenda, desires for his city is nothing more than the basics. It is the assurance of housing and nourishment for all those in need. It is also the ability to live with dignity, having access to clean water and without sewage at their doorstep.







## THE 1<sup>ST</sup> SOLAR ENERGY COOPERATIVE IN BRAZILIAN FAVELAS

### Revolusolar

**Project Mission:** To promote sustainable development in favelas through solar energy, creating an accessible and sustainable energy model with positive environmental, social, and economic impacts.

 **Babilônia, Rio de Janeiro**

**Interview Date:** April 24, 2023

**Key Strategies:** Energy generation; transition; income generation; environmental education; political advocacy; technological tourism.

**Themes:**     

Babilônia is a favela in the South of Rio de Janeiro, located between the neighborhoods of Leme, Copacabana, Urca, and Botafogo. Like many favelas, it faces challenges related to the lack of essential public services and police violence.



## UNDERSTAND THE PROBLEM

Energy poverty is a reality in the country, affecting various poorer areas and, especially, Black communities, following a well-defined pattern of race and class. Basic activities such as preserving food, lighting homes, or heating water for bathing are affected by physical, technological, and/or economic limitations in accessing energy, resulting in lower quality and more instability.

Furthermore, on a national scale, the main form of energy generation is hydroelectric, but in a scenario of changing rainfall patterns mainly driven by deforestation and climate change, the use of thermal power plants is common. Besides being polluting, these power plants are more expensive, a cost that reflects in the bills of Brazilians, further affecting family budgets.

## TECHNOLOGICAL SOLUTIONS

In this context, Revolusolar emerges, combining the experience of community leaders with **solar energy technology** and the potential for energy generation due to the high incidence of sunlight in Morro da Babilônia.

Dinei Medina, 42 years old, resident and community leader of Babilônia, tour guide, and member of Revolusolar since 2016, tells us that the first **installation of solar panels in a public space** was in 2018, in partnership with Casa Fluminense, at one of the community's major educational symbols, the "Escolinha Tia Percília," which promoted a sense of belonging and engagement among the residents.





*Solar energy is more beneficial for the poorest. We have to ensure that this becomes the development of low-income territories. How many schools are there in Complexo do Alemão, Maré, Jacarezinho (to install solar panels in these strategic public spaces)?”*

The organization works to promote the empowerment and autonomy of residents in order to achieve energy **transition within their own territory**, using a methodology known as the Solar Cycle. This is achieved through professional training, which enables residents to install and maintain the system; **training professionals** to conduct workshops and cultural events to **promote environmental education** and community involvement; and sustainable development, by reducing energy expenses for families, thereby promoting sustainability and empowerment.

In 2021, Revolusolar established the first Solar Energy Cooperative in Brazilian favelas, implementing a shared energy system on the rooftop of the Community Association that provides energy to 34 families, benefiting them by providing a discount on their electricity bills and increasing their purchasing power. This new dynamic in the community creates a true hub of solar energy, with the potential to promote **technological tourism** and enhance the community’s value.

*It’s the first technological tour within a favela focusing on solar energy. Actually, in Brazil, no one offers tours to see a solar plant. And we’re conducting this tour within Babilônia-Chapéu Mangueira areas.”*

Revolusolar is also involved in other projects, such as the “Ciclo Solar” initiative, in partnership with Circo Crescer e Viver, which aims to achieve a socially fair and inclusive energy transition movement in the central region of Rio by 2030. Another project, “Kurasí Tury”, seeks to promote self-generation of energy in the indigenous community of Terra Preta in the Amazon, focusing on professional training, strengthening local culture, and advocating for territorial rights.

## THE FUTURE IS JUST AROUND THE CORNER: TOWARDS 2030

When asked about what needs to be done to democratize solar energy by 2030, Diinei answers that it is crucial to democratize knowledge about this technology by talking about it everywhere. He emphasizes that knowledge produced in universities must flow back to society, creating a two-way street. The group also advocates for the relaunch of the “Luz para Todos” (Light for All) program with solar energy and strives for the new housing model under the “Minha Casa, Minha Vida” (My House, My Life) program to include solar panels. This would allow the replication of the Solar Cycle, similar to what is being done in Babilônia.





# AN AGENDA FOR IMPROVING PUBLIC TRANSPORTATION IN ITABORAÍ



## Itaboraí 2030 Agenda

**Project Mission:** To collect data on public transportation in the city to raise awareness among the population and engage in political advocacy.

 **Itaboraí**

**Interview Date:** April 27, 2023

**Key Strategies:** Local agenda for public policy; research; mapping.

**Themes:**   

Public transportation is a means of accessing basic services such as healthcare, education, work, and culture. However, living in an area where this service is nearly non-existent is also an expression of **environmental racism** embedded in our cities. Similarly, a transportation service that still operates on fossil fuels is also a matter of **climate justice**, as it is one of the key sectors responsible for greenhouse gas emissions.



Due to the inadequacy of the city's **public transportation** service, the Itaboraí 2030 Agenda was developed by the Itaboraí Observatory, a laboratory for **citizen-generated data** within the municipality.

## UNDERSTAND THE PROBLEM

Itaboraí, situated in the Eastern Fluminense region, faces significant challenges in its public transportation system. Apart from the inadequate availability of the service, the existing buses still run on fossil fuels and are in poor condition. It's common to see vehicles with broken carburetors emitting CO2 throughout the city.

This directly impacts the quality of life for Itaboraí's residents. Inara, one of the creators of the Itaboraí 2030 Agenda, reports cases of allergies developing due to inhaling the smoke emitted by these buses.

Furthermore, there is the air pollution caused by the installation of the Petrochemical Complex, which, according to research by Fiocruz, has increased rates of respiratory diseases in the city.

In the face of this situation, the health of Itaboraí's population is left to its own device, as there is no evident concern from the government to solve this problem. On the contrary, the local government even promotes deforestation through unchecked urbanization, resulting in a lack of sufficient trees to filter the air and provide shaded areas. This also leads to other problems, such as flooding due to the impermeability of the soil.

Even though transitioning bus fleets to electric vehicles is a sustainable alternative, Inara, a representative of the Itaboraí Agenda, states that there is no initiative in the city to undergo an energy transition for the public transportation service. This is due to the monopoly held by the Rio Ita company, which shows no interest in implementing such a transition.





*There has always been a sense of individualization in the process of environmental awareness and sustainability. You generate your waste, you need to separate it, you need to turn off your tap. Don't wash your car with a hose. And we understand that this personal effort is extremely important, but we also recognize that there are certain things that need to be guaranteed to the population, such as transportation."*

## TECHNOLOGICAL SOLUTIONS

The creation of a thematic agenda on public transportation was a way to highlight the precariousness of the service and demand improvements. Thus, the Itaboraí Observatory initiated a research among residents about the quality of the city's bus service. Surveys were conducted at bus stops throughout the municipality, where users were interviewed.

The collected data were organized into the document **Agenda Itaboraí 2030**, which not only provides an overview of the city's public transportation situation but also proposes a series of measures to enhance the quality of the service provided.

With the agenda in hand, the group returned to the streets to distribute the material to the population and engage in discussions. According to Inara, the greatest achievement of the Itaboraí Agenda was opening a dialogue with the community, which became more aware of the issue and what needs to be done.

*From the population, we heard a lot of compliments and that was very gratifying. Not because of our work, but because they realized that this research, the agenda, was in a way that they were able to understand and perceive the real problem*

## THE FUTURE IS JUST AROUND THE CORNER: TOWARDS 2030

For Inara, the future is built in the present. The construction of the Itaboraí 2030 Agenda was undertaken so that by 2030, the population can move with quality and safety, with effective bike lanes for residents, and where the reality is one of guaranteed rights, not negligence as it stands today.





# REFORESTATION IN THE "FLORESTA DO PERTENCIMENTO" (FOREST OF BELONGING) OF NOVA IGUAÇU



## EAE Institute - They Burn, We Plant

**Project Mission:** To transform society through environmental recovery and preservation, uniting ecotourism with environmental education.

 **Serra do Vulcão, Nova Iguaçu**

**Interview Date:** April 30, 2023

**Estratégias-chave:** Reforestation; social mobilization; environmental education; ecotourism; political advocacy.

**Themes:**     

The Gericinó-Mendanha Environmental Protection Area (APA) is a state conservation unit established in 2005, covering nearly 8,000 hectares, under the responsibility of the State Environmental Institute (Inea), and it is located within the boundaries of Nova Iguaçu, Rio de Janeiro, and Nilópolis municipalities. It holds significant environmental importance due to its direct connection with the Sepetiba and Guanabara watersheds, as well as the Guandu, Iguaçu, and Sarapuí rivers. The area also encompasses part of the Atlantic Forest, and volcanic geological structures like the Nova Iguaçu and Chaminé Lamego volcanoes.



## UNDERSTAND THE PROBLEM

One of the most established categories of conservation units, APA aims to preserve nature through the sustainable use of the natural resources existing in the region. Even though certain activities are allowed in these areas, they must be suited to the environmental characteristics of the area to ensure they do not endanger natural processes and local biodiversity.

Alex Vieira, a biologist and teacher of the Environmental Technical Course in Belford Roxo, and a member of the EAE Institute, tells us that in Baixada Fluminense, **heat islands and localized rainfall are becoming increasingly intense**. Places that never used to flood are now flooding, and incidents like hailstorms and landslides are also becoming more frequent. Additionally, in the northern part of the Gericinó-Mendanha Massif, there are still cases of criminal forest fires that destroy the native Atlantic Forest vegetation every year.

## TECHNOLOGICAL SOLUTIONS

In this context, the EAE Institute emerges, working to promote environmental recovery and preservation on the northern part of the Gericinó-Mendanha Massif in Nova Iguaçu. Their efforts combine **ecotourism** and **environmental education** to be a transformative force in society, directly addressing **heat mitigation and prevention of criminal forest fires caused by land grabbing**.

Established in 2018, the organization now has over 200 volunteers and many other participants **in reforestation planting activities**. The project fosters a respectful exchange with the environment, fostering a sense of belonging among the participants to the area. Thus, EAE achieves much more than simple reforestation; it fosters a true interaction between people and the land, a concept embraced by the project as the “Forest of Belonging.”







*It belongs to everyone, for everyone, with everyone. It doesn't belong to anyone, yet it is for all. And in the future, perhaps we'll have the second urban forest in Nova Iguaçu. And we will go down in history, either as crazy people or as environmentalists, or maybe both."*

These activities, born from societal engagement, also empower the local community. Notably, despite forest fires and acts of vandalism, over 5,000 native Atlantic Forest tree seedlings have been planted. The project operates without financial support but through the dedicated effort of volunteers. An example of this is their accomplishment of planting a thousand trees with the help of 250 people.

Furthermore, the project also engages in **political advocacy** within the municipality by contributing to the development of the Municipal Atlantic Forest Plan and the Municipal Environmental Education Plan of Nova Iguaçu.



*The impact on the environment is evident when people start looking at vegetation not just as plants, but as something that already belongs to them. And soon, these plants will begin to provide ecosystem services - some are already doing so. Some trees have borne fruit, certain birds have started frequenting our plantations, and this initiates a food chain involving insects and pollinators."*

One of our guiding principles is "Guiding for Preserving". Through informal environmental education, we are gradually fostering greater social and environmental awareness in people who visit the project. It is a gradual effort, but with the potential to yield significant results in the future.

## THE FUTURE IS JUST AROUND THE CORNER: TOWARDS 2030

In order for Nova Iguaçu to become a benchmark in Atlantic Forest reforestation, Alex states that there is a need for consistent public policies that align with this goal, rather than government policies that change from one administration to another. Furthermore, he also hopes that this initiative will inspire individuals and organizations in other municipalities.





# LEGISLATIONS AND INSTRUMENTS

In this chapter, we highlight some tools of public administration planning. It's an ongoing exercise that Casa Fluminense carries out to assess the commitments of municipal governments to sustainable urban development.

In pursuit of an integrated and cross-sectoral approach, seven strategic plans were selected, all of which should aim at local development while assisting in promoting climate justice.

**Master Plans:** They establish guidelines, incentives, and tools to organize land use in cities, prevent situations of irregular occupations in high-risk areas, ensure access to basic infrastructure, and provide other instructions for city development and improvements in the quality of life for the population.

**Sanitation Plans:** They guide public policies for water supply, sewage collection and treatment, and solid waste management. Their proper implementation can prevent water body pollution and avoid soil and water contamination.

**Solid Waste Management Plans:** They guide the management of generated waste, from collection to final disposal, with guidelines for promoting appropriate treatment processes to minimize environmental impacts.

**Mobility Plans:** Aim to ensure people's access to the city, with regulations to enhance urban mobility with a focus on public and non-motorized transportation, promoting greater social inclusion, reducing dependence on private cars, and consequently decreasing greenhouse gas emissions.



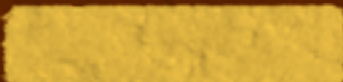
**Social Interest Housing Plans:** They seek to ensure access to decent housing for the entire population, especially those in socially vulnerable situations, contributing to the reduction of housing deficits and improving the living conditions of families at risk.

**Civil Protection and Defense Contingency Plans:** They establish preventive measures and rapid response actions in case of natural disasters and other emergency situations.

**Climate Change Mitigation and Adaptation Plans (or related names):** They outline measures to ensure the adaptation of urban infrastructure, energy efficiency, and the promotion of clean and renewable energy production.



Management Instrument / Municipality	Master Plan (1)	Sanitation Plan (2)	Solid Waste Management Plan (3)	Mobility Plan (4)	Social Interest Housing Plan (5)	Civil Protection and Defense Contingency Plan (6)	Climate Change Mitigation and Adaptation Plan (and various related names) (6)
	year of the last revision	existence	existence	existence	existence	existence	existence
Belford Roxo	<a href="#">2007</a>	Yes	No	No	Yes	N/A	N/A
Cachoeiras de Macacu	<a href="#">2006</a>	Yes	Yes	N/A	Yes	N/A	N/A
Duque de Caxias	<a href="#">2006</a>	Yes	No	N/A	Yes	N/A	N/A
Guapimirim	<a href="#">2003</a>	Yes	N/A	No	Yes	N/A	N/A
Itaboraí	<a href="#">2019</a>	Yes	No	No	Yes	N/A	N/A
Itaguaí	<a href="#">2016</a>	Yes	Yes	No	No	N/A	N/A
Japeri	<a href="#">2019</a>	No	No	N/A	Yes	N/A	N/A
Magé	<a href="#">2016</a>	Yes	Yes	No	Yes	N/A	N/A
Maricá	<a href="#">2006</a>	Yes	Yes	No	Yes	Yes	N/A
Mesquita	<a href="#">2006</a>	Yes	No	Yes	Yes	Yes	N/A
Nilópolis	<a href="#">2019</a>	Yes	No	No	Yes	N/A	N/A
Niterói	<a href="#">2019</a>	Yes	Yes	Yes	Yes	N/A	N/A*
Nova Iguaçu	<a href="#">2011</a>	Yes	Yes	N/A	No	Yes	N/A
Paracambi	<a href="#">2022</a>	No	No	No	Yes	N/A	N/A
Petrópolis	<a href="#">2014</a>	Yes	No	Yes	Yes	Yes	N/A
Queimados	<a href="#">2019</a>	No	No	No	Yes	Yes	N/A
Rio Bonito	<a href="#">2006</a>	Yes	No	No	Yes	Yes	N/A
Rio de Janeiro	<a href="#">2011</a>	Yes	Yes	Yes	Yes	Yes	Yes*
São Gonçalo	<a href="#">2018</a>	Yes	Yes	No	Yes	Yes	N/A
São João de Meriti	<a href="#">2021</a>	Yes	No	No	Yes	Yes	N/A
Seropédica	<a href="#">2006</a>	No	Yes	No	Yes	N/A	N/A
Tanguá	<a href="#">2006</a>	Yes	No	No	Yes	N/A	N/A

-  They have the plan. In the case of the Master Plan, they have it and it is up-to-date;
-  They do not have the plan. In the case of the Master Plan, they have it but it is out-of-date;
-  They did not respond to the survey or it was not found on the municipal website.

- 1 - Munic (2021);
- 2 - PSAM Mapas (2021);
- 3 - SNIS (2021);
- 4 - MDR (2022);
- 5 - MDR (2023);
- 6 - Search on municipal websites;

N/A - They did not respond to the survey or it was not found on the municipal website.

\* Municipalities with Climate Secretariat.

**Note:** The master plans must be reviewed every 10 years. They are marked in green if they are up-to-date; otherwise, they are marked in red. All municipal plans, if made available by the municipalities, can be accessed through hyperlinks.

The information provided on the Monitoring Dashboard was gathered from research and government websites. The data collection was conducted until May 19, 2023. If there is divergent information from the date of reading, please send an email to [casa@casafuminense.org.br](mailto:casa@casafuminense.org.br) so that the updating of this information can be carried out.



# MOVEMENTS AND PRACTICES FOR ADVOCACY

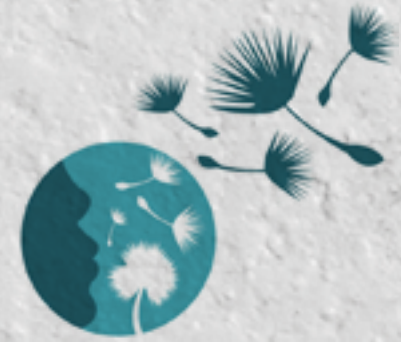


**A GENTE PRECISA  
IMAGINAR QUE É  
POSSÍVEL CRIAR UM  
FUTURO DIFERENTE!**

We have reached the end of the Guide to Climate Justice. After presenting a collection of social and ancestral technologies through initiatives, projects, and organizations that advocate for the climate agenda in Rio de Janeiro, we have decided to conclude our publication by presenting more inspirations from movements that have a rich history to share. Aware that there are many such movements, we have chosen only six that, in some way, share a part of their journey with Casa Fluminense to honor and amplify their socio-environmental legacies.

As mentioned in the concepts section, there is not a single way to do politics, nor is there a single way to advocate for climate justice. Therefore, the following movements are some examples that inspire us in the local, regional, national, and international dimensions of addressing the climate crisis and environmental racism using different tools, strategies, audiences, and political moments in Brazil.





*Fé no Clima*

# FÉ NO CLIMA

*Fé no Clima* (Faith in Climate) is an initiative by the Institute for Religious Studies (Iser) with the mission of bringing together and engaging religious leaders to raise awareness among their faith communities in addressing the climate crisis. They achieve this through dialogue between scientists, religious leaders, environmentalists, and representatives of indigenous communities, with goals focused on **adaptation, resilience, and climate justice**.

## WHAT THEY HAVE DONE?

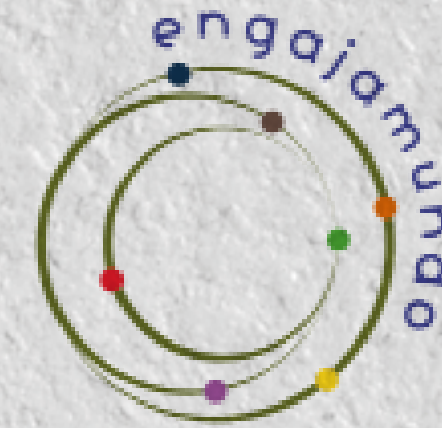
- [FÉ NO CLIMA GUIDE](#)
- Documentary [Fé Pelo Clima: Juventudes e Ação Ambiental](#)

## WHERE TO FIND THEM

[@fenoclima](#) | [fenoclima.org.br](http://fenoclima.org.br) | 📍 Rio de Janeiro

## HOW TO GET INVOLVED?

To stay updated on meetings, news, and help spread the legacy of Fé no Clima in Brazil, follow the movement on social media, share the guides within your faith community, and send an email to the responsible leaders of the initiative to propose partnerships and new social technologies: [fenoclima@iser.org.br](mailto:fenoclima@iser.org.br)



# ENGAJAMUNDO

Engajamundo is an organization of young leadership made by and for young people. We believe in the importance of youth engagement **to address the greatest environmental and social challenges in Brazil and the world**. We work through education, mobilization, participation, and advocacy, dedicating ourselves to empowering Brazilian youth to understand, participate in, and influence political processes from local to international levels.

## WHAT THEY HAVE DONE?

- [EduClima](#)
- [#EngajaNasEleições](#)

## WHERE TO FIND THEM

[@engajamundo](#) | [engajamundo.org](http://engajamundo.org) | 📍 Recife

## HOW TO GET INVOLVED?

Let's go! If you're up to 28 years old and not yet part of any local Engaja group, it is straightforward: you can register on our website to get involved and join our meetings. If you're over 28, there is an option to support the organization financially or help promote campaigns on social media and among youth in all spaces - schools, universities, collectives, social movements, and communities.





# COALIZÃO O CLIMA É DE MUDANÇA

Coalizão O Clima é de Mudança (The Climate is One of Change Coalition) is composed of organizations that advocate for socio-environmental and climate justice in low-income territories. It proposes a debate on the climate agenda by observing the **production of green technologies in the outskirts** of Rio, Brazil, and Latin America, **valuing ancestral knowledge and innovative solutions** that should be considered in major decision-making spaces regarding climate.

## WHAT THEY HAVE DONE?

- [O Clima é de Mudança Meeting](#)
- [Coalizão at COP27](#)

## WHERE TO FIND THEM

[@oclimaedeemudanca](#) | [oclimaedemudanca.com.br](#)

📍 Rio de Janeiro

## HOW TO GET INVOLVED?

If you live in Rio and are from a favela or a low-income community, we recommend not only following the Coalition's social media but also the platforms of the member organizations: [Agenda Realengo](#), [LabJaca](#), [Visão COOP](#), [data\\_labe](#) e a [Plataforma Cipó](#). This way, you stay updated on several political and climate-related agendas in Rio de Janeiro and access multimedia content. Strengthen, share, and stay engaged!



# REDE FAVELA SUSTENTÁVEL

Rede Favela Sustentável (Sustainable Favela Network) is a project by Comunidades Catalisadoras (ComCat) that aims to elevate the **potential of favelas as sustainable communities** through a network of knowledge exchange, mutual support, and collaborative actions between community initiatives focused on environmental sustainability and social resilience, along with technical supporters

## WHAT THEY HAVE DONE?

- [Rede Favela Sustentável Map](#)
- [SOS Água e Luz Application](#)
- Unique Publications on [Water and Energy Justice in Favelas](#) e [Energy Efficiency in Favelas](#)

## WHERE TO FIND THEM

[@favelasustentavel](#) | [favelasustentavel.org](#) | 📍 Rio de Janeiro

## HOW TO GET INVOLVED?

How can you contribute to making Rio de Janeiro's favelas more sustainable and its residents more resilient? Become part of Rede Favela Sustentável.

To register, send a WhatsApp message to **+55 (21) 97253-8748** or an email to [redesustentavel@favelasustentavel.org](mailto:redesustentavel@favelasustentavel.org). This way, you can take part in mobilizations, volunteer work, and technical reviews. What matters is that the network needs proactive leaders willing to mobilize even more possibilities, achieve results, and transform territories.





# PERIFA CONNECTION

PerifaConnection is a platform for disputing narratives about the outskirts present in all five regions of Brazil. Its work is carried out through three areas: content production, education, and coordination. This meeting point aims to **amplify the voices of Black and poor individuals in various spaces** through coordination and occupation. Historical patience and anti-racism are among the key values of Perifa (a nickname among close associates).

## WHAT THEY HAVE DONE?

- [Political Agenda of the Outskirts](#)
- [Climate and Outskirts Lab](#)
- [Perifa at COP27](#)

## WHERE TO FIND THEM

[@perifaconnection](#) | [linktr.ee/perifa](#) | 📍 Rio de Janeiro

## HOW TO GET INVOLVED?

Outskirts and youth are the two starting points, and there is still much to learn about these crucial and structural axes in Brazil. To stay updated on the education programs, collaborations, and become part of Perifa's national mobilization network, follow their social media channels and get in touch with their representatives: [@thuxthuane](#) e [@jacksonaugustojr](#). The prerequisite is to be young and from the outskirts.



# OCA URBANA FLUMINENSE

The Fluminense Urban Agenda Collaborative Observatory – OCA Urbana Fluminense – aims to contribute to an inclusive **urban agenda that addresses socioterritorial inequality** and promotes supportive and inclusive urban policies. To achieve this, it focuses on monitoring urban policies and fostering local and regional networks, seeking greater influence on urban policies for the 92 municipalities of the state of Rio de Janeiro.

## WHAT THEY HAVE DONE?

- [The Fluminense Urban Agenda Collaborative Observatory Journeys 2022](#)
- [OCA at the Urban Circuit of UN Habitat 2021](#)

## WHERE TO FIND THEM

[iabrj.org.br](#) | 📍 Rio de Janeiro

## HOW TO GET INVOLVED?

Created by the Brazilian Institute of Architects (IAB/RJ), it is also supported by the Council of Architecture and Urbanism of Rio de Janeiro (CAU/RJ), Casa Fluminense, the Laboratory for Studies of Transformations in Brazilian Urban Law (Ledub), the Brazilian Institute of Urban Law (IBDU), the Observatory of Favelas, among other organizations. More information about the project can be obtained by sending an email to [gtpoliticaurbanaehabitacao@gmail.com](mailto:gtpoliticaurbanaehabitacao@gmail.com) with the subject “Volunteering for OCA Urbana Fluminense”.



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# EDITORIAL STAFF

## PUBLICATION

Associação Casa Fluminense

## SUPPORT

Instituto Clima e Sociedade (iCS)

## PARTNERSHIP

Rede Favela Sustentável / COMCAT  
Comunidades Catalisadoras  
Observatório Colaborativo da Agenda Urbana Fluminense (OCA)

## CONSULTANCY

Andréia Coutinho Louback

## RESEARCH

Claudia Cruz  
Bruna Neres  
Lucas Martins  
Luize Sampaio  
Taynara Cabral  
Lennon Medeiros  
Paola Lima

## WRITING AND EDITING

Claudia Cruz  
Bruna Neres  
Lucas Martins  
Andréia Coutinho Louback  
Luize Sampaio

## TECHNICAL SUPPORT

Roberto Kishinami  
Diosmar Filho

## PROOFREADING

Mariflor Rocha

## VISUAL IDENTITY/ GRAPHIC DESIGN

Kaléu Menezes

## PHOTOGRAPHY

Mayara Donaria  
Gabriela Lino

## CASA FLUMINENSE GENERAL COORDINATION

Vitor Mihessen

## OPERATIONS COORDINATION

Taty Maria  
Larissa Cunha  
Letícia Marinho

## COMMUNICATIONS COORDINATION

Taynara Cabral  
Luize Sampaio  
Kaléu Menezes  
Carín Nuru

## MOBILIZATION COORDINATION

Fabiana Silva  
Lennon Medeiros  
Paola Lima

## INFORMATION COORDINATION

Claudia Cruz  
Bruna Neres  
Lucas Martins

## EXECUTIVE COORDINATION

Larissa Amorim



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