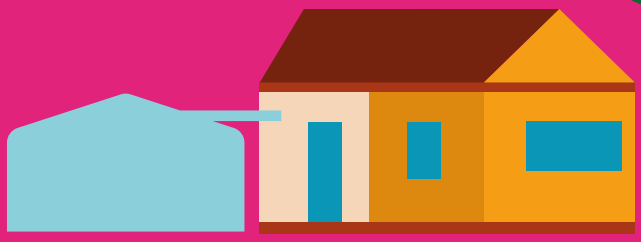

PARTICIPANT GUIDE

GLOBAL EXCHANGE ON CLIMATE ADAPTATION EXPERIENCES IN THE BRAZILIAN SEMI-ARID REGION

SABIÁ
CENTRO DE DESENVOLVIMENTO AGROECOLÓGICO

PARTICIPANT GUIDE

GLOBAL EXCHANGE ON CLIMATE ADAPTATION EXPERIENCES IN THE BRAZILIAN SEMI-ARID REGION

SUMMARY


RIO GRANDE DO NORTE
PARAÍBA
START POINT
RECIFE
VERTENTE DO LÉRIO
END POINT
SURUBIM
VERTENTES
PERNAMBUCO
OCEANO ATLÂNTICO
BRASIL
ALAGOAS
ROUTE
BRAZILIAN SEMI-ARID BORDER
N
W
E
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SCHEDULE

MAY 9th, 2025

TIME	ACTIVITY	LOCATION
6am 8:30am	Delegation departs for 3 simultaneous field visits	Radisson Hotel (Recife) Field visits
8:30am 11:30am	Visit to Experiences (Farmers Zé and Cilene)	Vertentes/PE
8:30am 11:30am	Visit to Experiences (Farmer Larissa Silva)	Vertente do Lério/PE
8:30am 11:30am	Visit to Experiences (Farmer Rafael Bezerra)	Vertente do Lério/PE
12pm 1:30pm	Lunch	Reserve Hotel (Surubim)
1:30pm 3pm	Knowledge Exchange Seminar	Reserve Hotel (Surubim)
3pm 4pm	Coffee break and closing moment	Reserve Hotel (Surubim)
4pm 7pm	Delegation returns to Recife	Reserve Hotel (Surubim) Radisson Hotel (Recife)

ZÉ BOCÃO E DONA CILENE (SÍTIO CARUÁ - VERTENTES)

At Sítio Caruá, located in the municipality of Vertentes in the Agreste region of Pernambuco, lives the family of José Severino de Lima, better known as Seu Zé Bocão, and Cilene Luzinete da Silva Lima, along with their two children.

When Seu Zé and Dona Cilene moved to the property in 2008, the household's water supply came from a well located two kilometers away, and water had to be purchased. In 2012, the family received a 16,000-liter rainwater harvesting cistern for household use, including drinking and cooking.

With the arrival of the One Land, Two Waters project *(Uma Terra e Duas Águas - P1+2)*, implemented by the Brazilian Semiarid Articulation *(Articulação Semiárido Brasileiro – ASA)* and carried out locally by Centro Sabiá, the family was provided with a 52,000-liter cistern. Since then, they have no longer needed to buy water for food production or livestock.

From an early age, their children are learning to care for the land and grow food using an agroecological approach, free from pesticides and genetically modified species. The family maintains a vegetable garden that feeds the household and generates a surplus for sale within the community. They also manage an expanding Agroforestry System, which helps cool their surroundings during the region's hot afternoons.

They grow corn, beans, pumpkin, cassava, cilantro, lettuce, kale, arugula, parsley, beets, scallions, spinach, peas, artichokes, scarlet eggplant *(jiló)*, and pineapple, and also raise chickens. The seeds for these crops are preserved in the family's own seed bank, built through exchanges with other farmers and organizations.

Their crops are irrigated using a Greywater Reuse System (RAC, from the Portuguese *Reúso de Águas Cinzas*), which filters household wastewater and returns it to nature, reducing environmental impact and water waste while providing essential nutrients to the plants.

RAFAEL BEZERRA DO NASCIMENTO (SÍTIO CHÃ DO PAVÃO - VERTENTE DO LÉRIO)

At Chã do Pavão Farm, located in the rural area of Vertente do Lério, in the northern Agreste region of Pernambuco, lives 32-year-old Rafael Bezerra do Nascimento. Rafael is a geography teacher currently pursuing postgraduate studies in Soil Fertility, Soil Management and Plant Nutrition, Organic Farming, and Precision Agriculture.

Rafael's academic background focuses on environmental awareness and sustainable farming practices. His goal is to show small-scale farmers that it is possible to make productive use of limited land, generating income while promoting sustainability in rural communities.

His journey is the result of years of hard work and dedication, driven by a vision to transform a seemingly unproductive 20-by-30-meter plot into a space full of potential. In this backyard, the teacher and farmer runs a diversified operation that includes goats, sheep, guinea pigs, rabbits, pigs, and poultry, along with a small vegetable garden that supports his family's food needs. He has also incorporated alternative technologies, such as a bio-water system, into the space.

Although the property is small, Rafael has built an efficient and profitable system. He sells animals for breeding and meat, as well as eggs and poultry. The farm is currently expanding, with plans to introduce fish farming in tanks and to start producing goat milk products.

On a two-hectare plot, Rafael maintains an agroforestry system that now covers one-third of his land. This initiative was inspired by the Jones Severino Pereira Agroforestry School, created by Centro Sabiá, and the "Young Agroforesters" project, which Rafael developed together with his students from São José Municipal School. In this area, he has implemented a system of rainwater harvesting cisterns to irrigate the entire site during the dry season. He is also plan-

ning the construction of a large biodigester to supply cooking gas for the community

The *"Jovens Agroflorestores"* project was designed to restore degraded areas through agroforestry systems. In 2023, it won the "People's Choice" award and placed second in the "Judging Panel" category at the Brazilian Restoration Olympics, promoted by WWF Brazil.

LARISSA SILVA
(SÍTIO VERMELHO - VERTENTE DO LÉRIO)

At Sítio Vermelho, located in the municipality of Vertente do Lério, in the Agreste region of Pernambuco, lives Larissa Silva de Oliveira, 27 years old, with her family: her mother, Gilda Pereira Silva de Oliveira; her father, Antônio Silva de Oliveira; her brothers, Antônio and Danilo; and her grandmother, Dona Iraci Maria Bezerra de Oliveira.

The family's property is equipped with a 16,000-liter cistern for household consumption, a second cistern for food production, known as *calçadão*, and a Greywater Reuse System for the Agroforestry System (RAC/SAF). The implementation of these social technologies was essential for boosting fruit production and livestock farming, which also enabled the family to generate income by processing and selling their products.

With the arrival of these technologies and changes in farming practices — eliminating the use of burning, pesticides, and heavy machinery — the soil has been recovered. Today, Larissa's family practices intercropping of multiple species: pumpkin, cassava, sweet potato, banana, guava, passion fruit, acerola, orange, coconut, pepper, and cotton, all grown using agroecological methods.

The family also preserves their traditional creole seeds in a personal seed bank for future planting. While many of the crops—like fruits, cassava, and pumpkins—are for household consumption, other resources such as silage, *gravatá* (a native plant), cactus, grass, mesquite pods, and mandacaru (a type of cactus) are used to feed their animals.

Livestock farming is the family's main source of income. They raise sheep, goats, pigs, and chickens. Through the Solidarity Revolving Fund (FRS) of Centro Sabiá, Larissa expanded her pig

farming with the sow Pandora, who gives birth to a new litter every three months and three weeks. Pandora's first litter was donated to the community to continue the solidarity cycle, while the other piglets were sold to supplement Larissa's income.

PRODUCTIVE SYSTEMS IN THE SEMI-ARID REGION

PRODUCTIVE SYSTEMS OF FAMILY FARMING IN THE BRAZILIAN SEMI-ARID REGION

The Brazilian Semi-Arid Region has long been a place of great resilience, where farmers have developed adaptation practices over centuries to survive in extreme climatic conditions. In the past, cotton production dominated the local economy and was known as “white gold.” This crop was widely cultivated on large estates and closely linked to livestock farming. However, its decline in the early 1990s had a major impact on local economies. At the same time, farming families who worked on the cotton plantations had already adopted more diversified systems, focused on rainfed crops such as corn, beans, and squash.

This intercropping system - combining corn, beans, and squash - is similar to the milpa system used in Mexico and other parts of Latin America. It is a traditional practice that optimizes land use and water resources. Corn provides support for the beans, which fix nitrogen in the soil, while squash covers the ground, helping to retain moisture and suppress weeds. This technique not only diversifies production but also improves soil health, enhances food security for farming families, and reduces vulnerability to climatic extremes.

As rainfed agriculture became increasingly vulnerable to prolonged droughts and rising temperatures, the need for more integrated and resilient systems led to the rise of agroforestry as a vital alternative. By integrating trees, crops, and livestock, agroforestry helps protect the soil, improve water retention, and sustain food production in areas where traditional farming is becoming less viable.

Agroforestry systems are emerging as an innovative solution for drylands, and the Centro Sabiá has been at the forefront of adapting this approach to the unique conditions of the Brazilian semi-arid region. By carefully designing agroforestry models that integrate native species adapted to the semi-arid environment with food crops and medicinal plants, Centro Sabiá promotes soil restoration, biodiversity recovery, and sustainable food production. These systems play a key role in restoring degraded land, regenerating local ecosystems, and creating microclimates that support biodiversity. They enable farmers to diversify their sources of income and food while increasing resilience to climate change. Additionally, agroforestry practices help mitigate the effects of desertification, which has been advancing in many parts of the region, demonstrating how it is possible to thrive sustainably even in some of the driest areas of Latin America.

Raising small animals, such as goats and sheep, remains essential for many families, serving as a form of “savings account.” These animals, well-adapted to arid conditions, are a source of both income and food security - especially during extended droughts. The integration of crop and livestock farming, alongside agroforestry systems, strengthens the sustainability of family farming by protecting soil health and maintaining long-term fertility.

Water management is another fundamental pillar of these productive systems. Rainwater harvesting cisterns and low-cost irrigation techniques are widely used to ensure production during dry periods. These water resources are crucial to supporting agroforestry systems and rainfed crops, creating a more stable and sustainable production cycle.

Creole seeds are vital to family farming in the Semi-arid region, as they are well-adapted to local climate conditions and cycles of prolonged drought. Passed down through generations, these seeds represent an important agricultural and cultural heritage. Their genetic diversity is key to crop resilience in the face of climate variability, allowing families to maintain production even in adverse years. Moreover, creole seeds play a crucial role in promoting food sovereignty, enabling communities to rely less on commercial seeds and retain control over their own farming systems.

Public policies, such as the Food Acquisition Program (PAA) and the National School Feeding Program (PNAE), play a critical role in supporting family farming in the Semi-arid region. These programs ensure market access for small producers and promote food security. They encourage diversified production and the adoption of agroecological practices while strengthening local economies and helping reduce the impacts of the climate crisis.

The productive systems of family farming in Brazil's Semi-arid region are a powerful example of innovation and adaptation in response to climate change. By combining traditional knowledge, agroecological practices, and new approaches like agroforestry, farming families are demonstrating that it is possible to live and produce sustainably in a region marked by water scarcity and desertification. In doing so, they offer replicable, resilient solutions for other arid and semi-arid regions worldwide.

Supporting Materials

Agroforestry Farming and Animal Husbandry in the Semi-Arid Region

The booklet Agroforestry Farming and Animal Husbandry in the Semi-Arid Region was developed in 2010 with the essential collaboration of farmers from the Sertão do Pajeú and Araripe regions of Brazil. These farmers, through their daily lives, maintain a harmonious relationship between "animals, plants, and people" - a relationship fundamental to living sustainably in the Semi-arid environment. These men and women possess deep knowledge about the interactions among these three elements and have developed unique strategies for producing food through agroecological practices in the region.

Raising animals has long been one of the oldest forms of storage and capitalization for people living in the Semi-arid region. It functions as a kind of "living savings account" that can be converted into financial resources in times of need. One traditional practice, known as *miunça,* involves raising small animals such as goats, sheep, and chickens, and plays a central part in this strategy. Women, in particular, are key to this practice - they are often the primary caretakers of these animals around the household and hold extensive knowledge about their management, as well as the prevention and treatment of illnesses.

Unfortunately, the rapid expansion of agribusiness in Brazil has led to the decline of locally adapted breeds, which are being replaced by high-productivity exotic breeds. This shift is resulting in genetic erosion and poses a threat to animal biodiversity in the Semi-arid region. In contrast, many families are resisting this trend, showing that family farming remains a key guardian of Brazil's socio-biodiversity.

The knowledge systematized in this publication is intended to support farmers and technical teams in strengthening agroecological practices. It is our collective responsibility to share, nurture, and continue building agroecological knowledge alongside the people of the Semi-arid region.

Agroforestry Farming or Agroforestry Systems

This guide, *Agroforestry Farming or Agroforestry Systems,* is part of a series of booklets developed by Centro Sabiá, entitled the *Knowledge Series,* aiming to encourage the development of agroforestry farming systems. It draws on the experiences and lessons learned by family farmers supported by Centro Sabiá. Designed as an educational tool, it serves both technical teams and community farming leaders, helping facilitate awareness-raising and training activities focused on agroforestry.

It also plays a key role in training teachers at rural schools in Pernambuco, shaping the framework for contextualized education. It reinforces the belief that a new way of farming is not only possible but necessary - one that supports agrarian reform, respects the environment, produces healthy food, and helps generate income for farming families.

Since its first edition, the guide has gone through several updates and revisions, incorporating insights gained over the years through workshops and farmer exchanges. These collaborative experiences have helped weave practical agroforestry knowledge into its core.

Agroforestry is presented as a sustainable alternative to conventional agriculture. It combines multiple plant species that work together to enrich the soil, promote biodiversity, and support a diversified, healthy, and economically viable production system. The guide outlines the essential conditions for setting up an agroforestry system and offers practical instructions on key practices such as pruning, intercropping, and sustainable land management, adaptable to different local contexts.

Agroforestry Systems in Brazil's Semi-Arid Region

Climate change and desertification have reached alarming levels, threatening the planet's environmental balance and hitting the most vulnerable communities the hardest. In response, new initiatives are emerging - aimed at better understanding these challenges and building technical, social, and political alternatives to confront its most extreme effects.

In Brazil's Semi-arid region, the impacts are severe and directly affect rural populations. Water scarcity and shifting climate patterns have led to significant displacement, forcing many to migrate to urban centers or regions dominated by large-scale agribusiness, where they often face new forms of conflict and inequality.

This publication shares the outcomes of a participatory research project carried out in various areas of Pernambuco, including *Sertão do Pajeú, Sertão do Araripe,* and Agreste. Farming families shared how they have been adapting their agricultural practices to cope with water shortages and climate stress, leading to meaningful changes in how they produce, organize, and sell their goods.

The primary goal of the study was to develop strategies for climate adaptation and to combat desertification through Agroforestry Systems. Supported by Brazil's National Climate Change Fund and the Ministry of the Environment, the research revealed that practices such as agroforestry farming, water storage, and cooperative organization have helped improve quality of life for farming families across the region.

A key concept in this context is resilience - the ability of a system to absorb external shocks and recover without losing its core functions. Agroforestry Systems, by integrating a diverse mix of plant species with different characteristics, have proven to be highly resilient and well-suited to the region's climate variability. At the same time, they help conserve biodiversity, protect soil and water, and support sustainable livelihoods.

With this book, Centro Sabiá and partner organization Caatinga aim to amplify the visibility of these grassroots initiatives, which are already generating tangible benefits such as high-quality food production, strengthened food security, biodiversity preservation, and contributions to climate change mitigation.

Agroecology is Life

SOCIAL TECHNOLOGIES

SOCIAL TECHNOLOGIES FOR CLIMATE ADAPTATION IN THE BRAZILIAN SEMI-ARID REGION

The Brazilian Semi-Arid region faces unique climate challenges: irregular rainfall, prolonged droughts, and increasing desertification. In response to these harsh conditions, adapting to climate change has become essential - particularly for communities reliant on subsistence and small-scale family farming. Within this context, the **Brazilian Semi-Arid Articulation (ASA)** has played a crucial role in transforming realities through the development and dissemination of social technologies, championing the concept of "**Coexistence with the Semi-Arid.**"

Rather than battling the region's natural characteristics, living with the Semi-Arid means learning to live sustainably within its climatic limits, respecting the rhythms of rainfall and cycles of drought. This approach underpins initiatives that aim not just for survival but for the empowerment and strengthening of rural communities.

One standout initiative is the **One Million Cisterns Program (P1MC)**, led by ASA. The program has already surpassed its original goal, constructing over a million cisterns to ensure access to clean water for families in the Semi-Arid. The **precast concrete plate cisterns** are the most widespread social technology in the region, exemplifying this sustainable approach.

First-water cisterns store up to 16,000 liters of rainwater for human consumption. Second-water cisterns, with capacities of up to 52,000 liters, hold water for food production and livestock. These technologies were developed through a dialogue between technical experts and farming families, providing millions of people with reliable access to water in a region historically defined by drought, social exclusion, and poverty.

Another innovative technology are the **greywater reuse systems.** Greywater from household activities - such as bathing and laundry - is treated, filtered and reused to irrigate agroforestry plots. This technique enhances food security, promotes sustainable water use, and contributes to the regeneration of the Caatinga biome through increased vegetation cover and improved soil health.

Additional social technologies for living harmoniously with the Semi-Arid environment include the construction of **subsurface dam reservoirs** and the adoption of small-scale drip irrigation systems. These innovations promote more efficient use of limited water resources for agriculture. Underground dams, for example, store water beneath the surface, making it accessible during extended dry periods and significantly reducing the need for constant irrigation - thus supporting sustainable food production even in harsh climatic conditions.

All of these social technologies are the result of collective innovation, blending technical expertise with the lived experiences and traditional knowledge of local communities. Organizations such as **Centro Sabiá** have been instrumental in facilitating this knowledge-sharing process, making these technologies replicable and effective in other regions. Crucially, farmers are at

the heart of this transformation by innovating, driving change and spreading knowledge.

These technologies also play a vital role in empowering rural women. Many initiatives focus on strengthening the autonomy of female farmers, who are often responsible for managing household water and food production. By ensuring access to water and food security, these technologies directly enhance quality of life and help to reduce gender inequality in rural areas.

In the face of climate change, the Brazilian Semi-Arid region stands out as a source of important lessons for the world. Communities here have been adapting to climate impacts for decades, with social technologies serving as powerful tools for ensuring survival with dignity. Rather than seeing the Semi-Arid as a place of scarcity, these innovations reveal it as a land of resilience and potential.

It is also essential to recognize that these social technologies are part of a broader **climate justice** agenda. Although the communities of the Semi-Arid have contributed little to global greenhouse gas emissions, they are among the most affected. Promoting and strengthening these technologies must therefore be a priority in public climate adaptation policies - both in Brazil and internationally. As global climate debates intensify, the Brazilian Semi-Arid offers a powerful example of how communities can respond creatively and resiliently to climate challenges, building a future rooted in harmony with the land.

Supporting Materials

Concrete Plate Cisterns: Building Proper Technologies

This booklet serves as a detailed guide for building a precast concrete plate cistern designed to collect and store rainwater. This technology is especially valuable in arid and semi-arid regions, where water access is limited and rainwater harvesting offers a practical solution.

The cistern is cylindrical and partially buried, measuring approximately 11.5 feet (3.5 meters) in diameter and 6 feet (1.8 meters) in height, with a storage capacity of about 4,200 gallons (16,000 liters). It is intended to collect rainwater from rooftops or other catchment surfaces, channeling it into the cistern through a system of pipes. In addition to outlining the construction process, the guide offers recommendations for maintaining the cistern and ensuring the safe use of stored water.

The construction process is broken down into several clear steps, including site selection, excavation, mold preparation, casting the concrete plates, and assembling the roof. This concrete cistern system provides a low-cost, efficient solution for addressing water scarcity, helping rural communities build resilience in the face of climate change.

Greywater Reuse in Agroforestry Systems in the Brazilian Semi-Arid Region

This booklet explores the implementation of greywater reuse systems to support agroforestry irrigation in Brazil's Semi-Arid region, where water resources are extremely limited. The technology involves reusing lightly used household water - such as from showers and laundry - after basic treatment, for irrigation in agroforestry systems.

The guide presents the Greywater Reuse System as a practical and efficient solution for water-scarce environments. Widely adopted throughout the Semi-Arid region with support from organizations like **Centro Sabiá,** this system promotes drip irrigation in Agroforestry Systems, reducing water waste and maximizing the use of available resources for sustainable agriculture. It also improves soil quality and helps maintain plant cover, which is critical for regenerating the Caatinga biome.

Implementing RAC systems requires not only installing the necessary infrastructure for water filtration and storage but also applying agroecological practices, such as drip irrigation, to ensure the effective and sustainable use of resources.

LIVING LANDS – Greywater Reuse and Agroforestry in the Semi-Arid Region

Caatinga, Guardian of Water

This text highlights the vital role of the Caatinga biome, the only exclusively Brazilian biome, in conserving water resources in the Sertão do Pajeú, Pernambuco. It explains how the des-

truction of native vegetation and poor land management practices have exacerbated water scarcity, emphasizing the urgent need to protect riparian forests and Permanent Preservation Areas (APPs, in Portuguese) to safeguard both water quality and availability.

The Caatinga is critical to regulating the water cycle, absorbing rainfall, recharging aquifers, and preventing soil erosion. However, indiscriminate deforestation and land clearing for unsustainable agricultural practices have severely compromised water availability and biodiversity in the region.

The text draws attention to human activities that disrupt the hydrological balance and underscores the importance of public policies that support the restoration of degraded lands, the adoption of social technologies, and the promotion of agroecological practices. It also highlights the central role of local communities in conserving this unique and irreplaceable biome.

CREOLE SEEDS

WHAT ARE CREOLE SEEDS?

The practice of selecting plants and animals with desirable traits began with the domestication of species, through a method known as mass selection, or traditional genetic improvement. Over thousands of years, farmers developed this process through their knowledge, effort, and dedication. This wisdom, and the genetic material they preserved, have been passed down through generations and remains alive today in the practices of peasant, Indigenous, and black ancestral communities.

When we talk about seeds, we are also referring to stems, rhizomes, tubers, and even animals, elements essential to farming and animal husbandry. With the rise of the Green Revolution in the 1960s, laboratory-developed seeds became central to agricultural modernization. This shift led to the replacement of traditional creole seeds, often reduced to the status of mere grains, with commercial varieties labeled as “improved.”

Farmers traditionally favor seeds from plants that are well adapted to their local environment. This results in more resilient crops that are productive and less dependent on external inputs, supporting greater economic autonomy. In contrast, conventional breeding, conducted in controlled environments, prioritizes uniformity, high yields, and disease resistance, but typically demands significant investments in inputs, irrigation, and technology.

Creole seeds are the product of traditional selection, or even the re-adaptation of commercial varieties over time by farmers themselves. They are deeply rooted in the histories of their communities and symbolize cultural identity and resistance. This vital role has been recognized internationally by the Convention on Biological Diversity and the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), which has been incorporated into Brazilian law.

In Brazil’s Northeast, civil society efforts to preserve and promote creole seeds date back to the 1970s, with the work of the Ecclesial Base Communities (CEBs) in Alagoas and Ceará, and to the 1990s with the Seeds Exchange Network (RIS) in states such as Paraíba, Piauí, Pernambuco, Minas Gerais, and Ceará.

In 2003, Brazil updated its seed legislation, previously from 1977, introducing changes that largely benefited seed companies and research institutions focused on the development of new cultivars, facilitating private investment in the sector.

In this context, preserving and using creole seeds stands as a powerful act of autonomy, cultural resistance, and agroecological sustainability.

Supporting Materials

Seed Houses and Fields for Food Production

The booklet Seed Houses and Fields for Food Production is part of Centro Sabiá's Knowledge Series. It offers information about creole seeds, including what they are, a brief history of initiatives involving them in Brazil's Northeast, results from comparative trials between creole and commercial seeds, a summary of four experiences supported by Centro Sabiá, and key insights and reflections drawn from these documented experiences.

The guide also traces the history of seed-saving efforts in Brazil's Northeast, beginning with the Base Ecclesial Communities in the 1970s and leading up to the creation of the Seeds of the Semi-Arid Program. This initiative reached 19,500 families and helped establish around 1,000 seed houses and community seed banks - key tools for strengthening family farming by preserving biodiversity and ensuring food security.

Comparative trials between creole and commercial seeds - such as cowpea beans and corn - have shown that creole varieties often outperform commercial ones in adaptability and yield, especially under harsh growing conditions. The publication also highlights the stories of farmers like Bete, a guardian of banana varieties, and Elsa, who preserves native chicken breeds. Their work illustrates the crucial role that traditional seeds and breeds play in sustainable agriculture and in safeguarding local culture.

The guide advocates for the preservation of agricultural knowledge across generations, promotes farmers' autonomy in managing and conserving their own seeds, and strengthens their participation in seed exchange networks, which are vital for maintaining genetic diversity. It also addresses key challenges - such as the unequal burden of agricultural labor on women - and emphasizes the importance of a more balanced division of household responsibilities.

This material aims to inspire and support public policies that recognize and value creole seeds, which are foundational to family farming and essential for building a more sustainable and equitable future.

Seeds of Passion: a Community-Based Strategy for Conserving Local Varieties in the Semi-Arid Region

In agriculture, a seed is far more than just an input. As a carrier of both biological and sociocultural "messages" passed down through generations, it is the key regenerative resource for sustaining agricultural production. More than a simple means of production, the seed symbolizes farmers' autonomous ability to reproduce their way of life.

In the Agreste region of the state of Paraíba, these seeds are known as *Seeds of Passion (Sementes da Paixão).* Behind this powerful symbol lie complex strategies developed by farming families to preserve a rich genetic heritage that they themselves safeguard. These strategies include distinct practices of selection, storage, and exchange, practices that are often overlooked by policymakers, who tend to classify these seeds merely as grain. This narrow definition socially devalues the seeds and contributes to a troubling process of genetic and cultural erosion.

This publication highlights the work of family farmer organizations in the Agreste of Paraíba to strengthen traditional seed conservation strategies. Their efforts stand in contrast to dominant public policies and approaches, underscoring that any effective strategy for conserving agricultural biodiversity must also involve revitalizing the sociocultural diversity of rural communities.

RURAL YOUTH IN BRAZIL'S SEMI-ARID REGION

RURAL YOUTH IN BRAZIL'S SEMI-ARID REGION

Since its founding in 1993, Centro Sabiá has worked to promote rural youth leadership, support farming families, and strengthen the role of young people in advancing agroecology. Over the years, this mission has become even more vital as we have refined our methodologies, focus areas, and strategies across different territories. We actively seek partnerships to expand this work, empowering youth as agents of change and holders of rights.

In 2005, our commitment deepened with the creation of the Commission of Young Agroecology Multipliers (CJMA). Since then, youth engagement has been a core pillar of Centro Sabiá's Institutional Strategic Plan. Throughout this journey, we have received strong support from cooperation partner terre des hommes schweiz.

Today, our work centers on empowering young people between the ages of 15 and 29, particularly rural youth, black youth, black ancestral descendants, artisans, and students in technical or university programs. As Elisa Guaraná de Castro observed in 2009, the invisibility of rural youth remains a pressing issue. This invisibility is reflected in everything from the stereotypes associated with "rural life" to the limited autonomy young people experience within their families and broader society.

Rural youth face a range of challenges: restricted access to land, water, and credit; inadequate transportation and infrastructure; a lack of supportive public policies; high unemployment; and an education system disconnected from their realities. They also confront systemic issues such as patriarchy, racism, and violence, problems common to both rural and urban areas. To tackle these challenges, Centro Sabiá, alongside networks like the National Agroecology Alliance (ANA) and the Pernambuco Youth Forum (FOJUPE), has developed action strategies rooted in agroecology. These efforts aim to place youth at the center of both the conversation and the action. As young people often affirm: "We are not the future; we are the present."

Globally, figures like Swedish climate activist Greta Thunberg demonstrate the power of youth leadership in fighting for a sustainable future. In a time when science is under threat and authoritarian ideologies are gaining ground, it is more important than ever to deepen democracy, fight for freedom over our bodies and our lives, and protect the rights of all citizens. Agroecology, with its holistic and inclusive vision, offers powerful tools for connecting rural and urban struggles.

Combatting racism, sexism, and LGBTQ+ discrimination is also essential. These forms of violence, prevalent in both cities and rural areas, cause lasting physical and emotional harm to young people. As we often say in our work: #NoFeminismNoAgroecology, #NoAgroecologyWithRacism, #NoAgroecologyWithLGBTQphobia.

Across the region, youth are already leading the way in building sustainable livelihoods. They are growing organic food, processing fruits, creating crafts, producing music and media, painting murals, leading community tourism initiatives, managing solidarity funds, and preserving native

seeds and plants. These projects embody the strength and resilience of young people committed to change. As Dom Pedro Casaldáliga once wrote: "It's the fences that stop us from living, loving, accessing land, housing, quality education, and from staying on our land with dignity."

Support Materials

Youth and Staying on the Land

Ensuring that young people remain in rural areas has long been a challenge for Centro Sabiá and other organizations in the agroecological movement. This issue is a strategic priority, given the vital role future generations play in rural succession, building agroecology as a sustainable alternative to improve farming families' quality of life and ensuring access to healthy food for society as a whole.

In 2014, Centro Sabiá launched a training initiative to strengthen its engagement with youth, mapping their involvement in institutional dynamics and assessing their roles in technical and educational support. Several key challenges emerged during this process, including the invisibility of youth labor, gender inequality, and a lack of structural public policies, all of which significantly affect young people's ability to remain in rural areas.

This publication presents the outcomes of that research, highlighting structural issues affecting youth retention in rural areas. It is organized into sections that explore the research goals, core themes such as family dynamics, education, and political participation, and reflections on Centro Sabiá's contributions, along with future perspectives shared by young people themselves.

Commission of Young Agroecology Multipliers – Knowledge Series

This publication outlines Centro Sabiá's journey in creating and strengthening the Commission of Young Agroecology Multipliers (CJMA), an empowering space for training and mobilizing youth aged 15 to 29.

Since its founding in 1993, Centro Sabiá has recognized young people as essential to advancing agroecology, promoting their active participation in family and community life. In 2005, with support from partners such as terre des hommes schweiz, this work expanded to include the training of young leaders in the Sertão, Agreste, and Mata Sul regions of Pernambuco.

The CJMA aims to strengthen young people's rural identities, support their self-organization, and encourage their political engagement in social movements and decision-making spaces. Its initiatives focus on agroecological education, youth communication, and sustainable inco-

me generation, offering opportunities for young people to engage in agroforestry, plant nurseries, community media, and crop rotation systems.

Centro Sabiá's educational approach focuses on building an agroecological movement rooted in youth leadership, ensuring that young people can remain on the land with dignity and autonomy.

15 Years of the Commission of Young Agroecology Multipliers – CJMA

This publication brings together the life stories of young people who have participated in the Commission of Young Agroecology Multipliers (CJMA) over the past 15 years.

As you explore these stories, you'll see how deeply the CJMA has contributed to the personal and professional growth of youth who discovered this collective as a space full of possibilities. These are young people who were once silenced by shyness and fear of judgment, who struggled to express their identities, feelings, sexuality and knowledge. Yet they all shared a common desire: to find a space where their voices could not only be heard but valued.

The publication also highlights the mentorship and support process that Centro Sabiá has developed with rural youth through the CJMA. This work has empowered young people and strengthened the institution itself, thanks to the learnings, insights, and methodological innovations built throughout this journey.

Dialogue Between Rural and Urban Youth

TERRITORIAL MARKETS

TERRITORIAL MARKETS AND FAMILY FARMING IN BRAZIL'S SEMI-ARID REGION

Territorial markets are essential to sustaining the economic and social fabric of rural communities across Brazil's Semi-arid region. By promoting the sale of agroecological products through direct-to-consumer spaces, these markets strengthen local economies and empower family farmers with greater autonomy.

Direct Sales and the Social Construction of Markets

In the Semi-arid region, direct sales by farmers have a long tradition, taking place in street fairs, local markets, and even within the communities themselves. These territorial markets, beyond promoting a closer connection between producers and consumers, are crucial for ensuring fair compensation for farmers by eliminating intermediaries. Agroecological fairs are a great example of this expansion, allowing family farmers to sell directly to consumers, leading not only to better financial returns but also to a stronger bond with local culture and territory.

Beyond fairs, collaborative efforts to build territorial markets have expanded opportunities for small-scale farmers by adding value to local products and strengthening short food supply chains. This process involves partnerships among cooperatives, producers' associations, and conscious consumers, creating solidarity-based markets that prioritize local development.

Institutional Markets: PAA and PNAE

Institutional markets, such as the Food Acquisition Program (Programa de Aquisição de Alimentos – PAA) and the National School Feeding Program (Programa Nacional de Alimentação Escolar – PNAE), are essential pillars in the structuring of territorial markets in the Semi-arid region. These programs provide secure sales channels for family farmers, allowing them to sell their products directly to the government to supply schools, hospitals, and other public institutions. These programs not only guarantee a market for agroecological products but also promote sustainable farming practices, helping to strengthen agroecology as a viable, climate-resilient model of food production.

Benefits for Local Communities

The impact of territorial markets goes beyond product commercialization; they directly contribute to the prosperity of entire regions. By strengthening local economies, these markets promote income circulation within the community itself, fostering sustainable development. They also support food and nutrition security by encouraging the production and consumption of healthy, diverse foods.

Moreover, territorial markets help empower farming families, especially women and young people, who find real opportunities for economic and social leadership in these spaces. This process increases the resilience of rural communities, making them less dependent on external markets and more self-reliant.

Challenges and Opportunities

Despite significant advances, major challenges remain in fully consolidating and expanding territorial markets in the Semi-Arid region. Farmers face obstacles such as inadequate infrastructure, transportation difficulties, and limited access to public policies. However, initiatives such as strengthening farmer cooperation networks, leveraging adaptation technologies, and expanding institutional markets offer concrete pathways to overcome these barriers and sustain local production systems.

Support Materials

Agroecological Food: A Path to Quality of Life

It is the State's responsibility to guarantee everyone the right to healthy food. In Brazil, this means ensuring access to nutritious, high-quality, sufficient, and contaminant-free food. Making this a reality requires access to land and water for food production, respect for cultural food traditions, and fair systems of distribution and trade.

Discussing food also means examining how it's produced, marketed, and consumed. We need to reflect on how the modernization of agriculture has posed serious challenges for both family farmers and consumers.

In this context, this publication explores a wide range of topics, from conventional farming and hunger in Brazil and Pernambuco, to food security through agroecological systems. It also highlights strategies for producing healthy food and the essential role that women play in ensuring food for their families.

Experiences in Agroecological Marketing

This series brings to life stories of knowledge, resilience, and people forging sustainable ways of living in harmony with nature. The initiative was supported by the Demonstrative Projects Subprogram (PDA) of Brazil's Ministry of the Environment.

Told by the groups themselves, these stories emerged from a knowledge-sharing process carried out between 2003 and 2004. The goal was to learn from real-world practices, highlighting rich experiences filled with wisdom, experimentation, and growth. Rural communities and family

farmer organizations have accumulated knowledge, tested new technologies and production systems, and bridged traditional practices with modern insights through respectful dialogue.

Each community developed its own storytelling approach, creating a rich mosaic of experiences. By highlighting the value of lived experience, this series aims to inform more effective public policies for family farming and environmental protection, contributing to sustainable development.

Documenting the Agroecological Marketing Experience

This systematization is part of a long-term journey that began in 1998 and was documented in 2004. This publication aims to support other agroecological marketing initiatives, strengthen institutional learning and reflection at Centro Sabiá, and share key insights with farmers and their organizations.

By mapping experiences, challenges, and achievements, this systematization has become a valuable tool for strengthening the implementation of agroecological farmers' markets in Pernambuco. It captured experiences from markets in Serra Talhada and in the neighborhoods of Graças and Boa Viagem, in Recife.

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