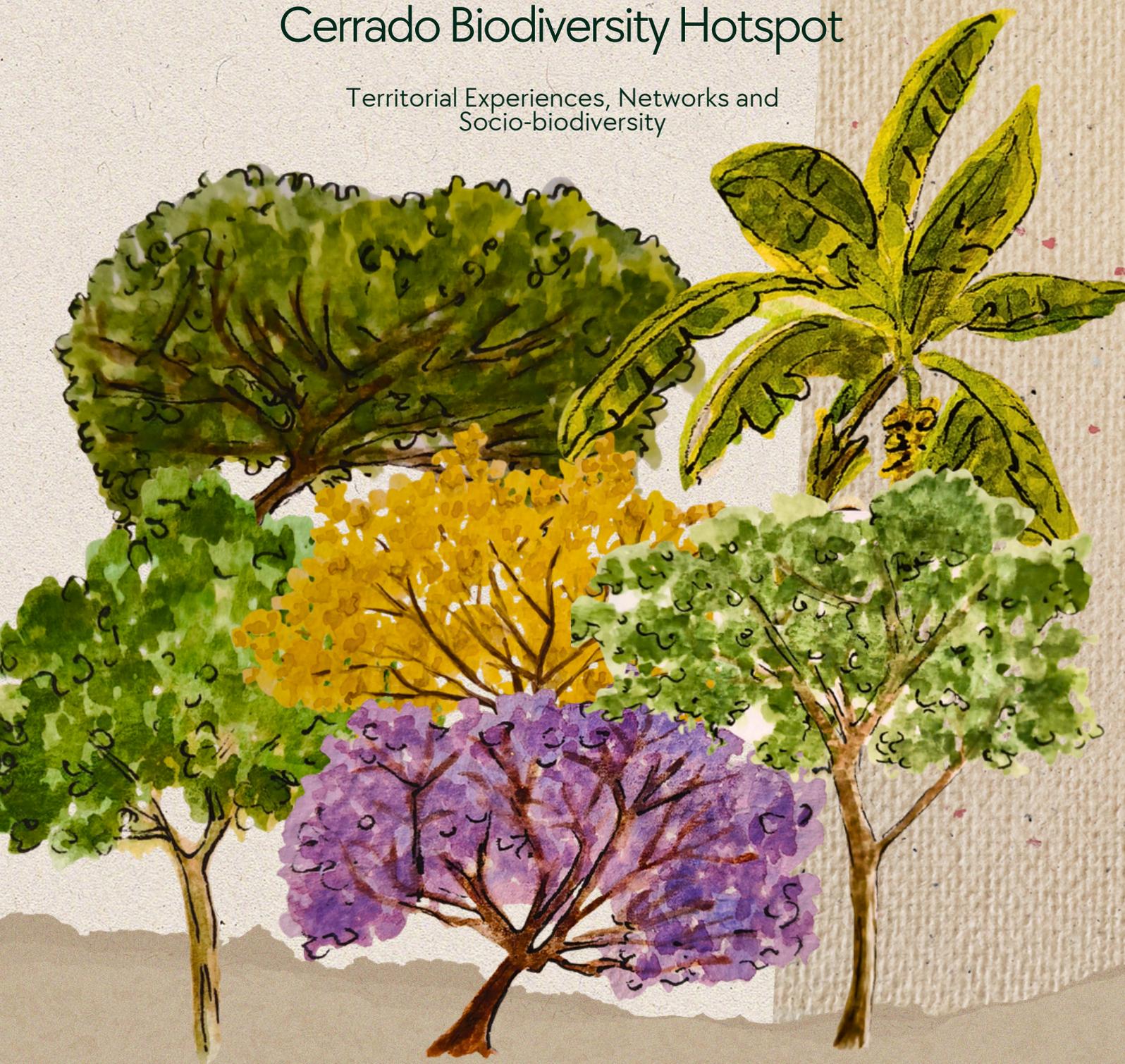


Community- Based Ecological Restoration

Cerrado Biodiversity Hotspot

Territorial Experiences, Networks and
Socio-biodiversity



Realized:



In partnership with:



Communication:



Summary



Geraizeira woman
(Traditional community member from Northern of Minas Gerais)

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The Critical Ecosystem Partnership Fund is a joint initiative of l'Agence Française de Développement, Conservation International, the European Union, Fondation Hans Wilsdorf, the Global Environment Facility, the Government of Canada, the Government of Japan and the World Bank. This knowledge product was financed by the Government of Canada through Global Affairs Canada. CEPF's goal is to ensure that civil society is engaged in biodiversity conservation..





A BIODIVERSITY HOTSPOT

The Brazilian Cerrado is internationally recognized as one of the planet's 36 global biodiversity hotspots, harboring approximately 5% of all terrestrial biodiversity and playing a strategic role in climate regulation and water security for South America (Alencar et al., 2020). Known as the "Cradle of Waters", the biome concentrates, in its plateau areas, the headwaters of major hydrographic basins that supply millions of people and sustain multiple ecosystems.

Despite its ecological, social, and cultural relevance, the Cerrado is also one of the world's most pressured biomes, with historically high rates of native vegetation conversion and habitat loss (MapBiomas, 2023). In this context, ecological restoration emerges not only as an environmental response but as an integrated strategy for biodiversity conservation, climate change adaptation, and the strengthening of local livelihoods (FAO, 2021).

This document forms part of a knowledge product developed under the scope of the Critical Ecosystem Partnership Fund (CEPF), a global program dedicated to empowering civil society in the conservation of the world's biodiversity hotspots.

Over the last two decades, CEPF has supported initiatives that reconcile conservation, sustainable use of biodiversity, and local development, promoting innovative and replicable solutions in territories of high ecological relevance. In the Cerrado Biodiversity Hotspot, this support has been fundamental for the emergence and consolidation of community organizations, seed networks, cooperatives, and territorial arrangements that develop concrete ecological restoration solutions combined with social inclusion.

The product presented here was built based on field visits, qualified listening, and systematization and graphic facilitation processes with community organizations and cooperatives, gathering relevant and innovative territorial experiences operating in different regions of the Cerrado. More than presenting techniques, this document seeks to highlight how ecological restoration emerges as a territorial strategy, sustained by people, local organizations, and collaborative networks.

A handwritten signature in black ink, appearing to read 'Poncelet', is written over a white background.

Peggy Poncelet
Grant director



Everlasting flower (*Paepalanthus chiquitensis*)

New Era Institute



THE RESTORATION GENERATION

Instituto New Era (INE) is a civil society organization established in Rio Pardo de Minas, in the north of Minas Gerais, dedicated to productive and inclusive ecological restoration in the Cerrado biome. We work in a network with traditional communities, Indigenous peoples, family farmers, and local organizations, implementing restoration models that integrate biodiversity conservation, income generation, and community strengthening.

Within the scope of this knowledge product, we led the process of systematizing territorial experiences that highlight the role of grassroots organizations in building innovative solutions for Cerrado restoration.

Today, we are part of the monitoring panel of the Food and Agriculture Organization of the United Nations (FAO) platform, within the framework for Ecosystem Restoration Monitoring (FERM). We are recognized as a best practice in "Inclusive Restoration with Traditional Peoples and Communities: Production, Commercialization, and Community Restoration," acknowledged nationally and internationally for promoting approaches that place local communities—especially *Geraizeiros*, *Quilombolas*, and *Xakriabás*—as protagonists of restoration processes, articulating traditional knowledge, applied science, and social innovation.

We are featured on the Impacta Brasil portal, an initiative of the Ministry of Development, Industry, Trade, and Services (MDIC) that gathers 351 climate solutions from all states in the country. In this scenario, we were selected to compose the Solutions Hub for COP30.

For the Instituto New Era, sharing the richness of our biome while learning from innovative initiatives led by different organizations committed to ecological restoration has been a special and inspiring opportunity. We are the restoration generation: may our seeds germinate not only in the soil but also in the hearts, minds, and souls of many.

Nondas Ferreira da Silva

Presidente do Instituto New Era



The Call of the Cerrado and the Path to Restoration



What is Restoration?



Guavira fruit (*Campomanesia adamantium*)

REBIRTH OF THE CERRADO: UNDERSTANDING ECOLOGICAL RESTORATION

Imagine a forest where most of the vegetation is not in the trunks reaching for the sky, but in the deep roots embracing the soil and seeking aquifers. This is the Cerrado, nicknamed the "Cradle" or "Heart" of Brazil's Waters. Keeping the Cerrado standing is not just a matter of preserving the landscape: it is a water and climate survival strategy for all of Brazil.

The devastation of the Cerrado by agribusiness and disordered land use has put this biome at risk. Ecological restoration emerges as a tool for hope and action. It is not just about "planting green," but about healing the land, allowing it to pulse again. Restoring the Cerrado ensures that waters continue to spring forth and that the unique biodiversity of this tropical savanna remains a future for the next generations.

WHAT IS ECOLOGICAL RESTORATION?

Often confused with simple tree planting, restoration is a much broader and more complex concept. According to the Society for Ecological Restoration (SER), it is the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed. In the context of the Cerrado, researchers like José Felipe Ribeiro from Embrapa Cerrados emphasize that restoration seeks to reestablish not just the form of the vegetation, but its **ecological functions** (RIBEIRO et al., 2011). This means recovering the environment's capacity to retain water, cycle nutrients, protect the soil against erosion, and provide shelter and food for native fauna. The ultimate goal is to achieve a resilient, self-sustaining ecosystem integrated into the landscape.

BEYOND TWISTED TREES: THE CHALLENGE OF IDENTITY

One of the most common and damaging errors in Cerrado restoration is attempting to transform it into a dense forest where, originally, open fields existed. The Cerrado is a mosaic of phytophysionomies ranging from Campos Limpos (grasslands) to Cerradão (forest formations). Researcher Giselda Durigan warns of the danger of "afforestation" in open ecosystems. According to Durigan and Ratter (2016), the massive planting of trees in savanna or native field areas can be disastrous, resulting in the loss of endemic biodiversity and alteration of the water regime. Restoring the biome requires intelligence and local knowledge: one must know if the original area was a field, a vereda (palm swamp), or Cerrado stricto sensu, and select the appropriate species for each "site."

Take note!

Researcher Giselda Durigan highlights the risks of afforestation in open ecosystems. Durigan and Ratter (2016) argue that large-scale tree planting in savannas or native grasslands can be catastrophic, leading to the loss of endemic species and changes in water cycles. Biome restoration requires a nuanced understanding and local knowledge: it is essential to determine whether the site was originally a grassland, a vereda, or Cerrado stricto sensu, ensuring the appropriate species are selected for each specific soil type.

ACTION STRATEGIES: HOW TO RESTORE?

The science of restoration in the Cerrado has evolved into diverse techniques, which vary according to the level of soil degradation and investment capacity.

STEP-BY-STEP GUIDE TO PRODUCTIVE ECOLOGICAL RESTORATION



NOTE

“Successful restoration in the Cerrado must consider the stratum formed by native grasses and shrubs, as this is where the majority of the biome's plant biodiversity resides” (DURIGAN, 2020).

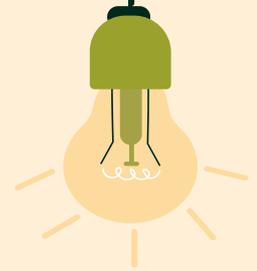
A PACT WITH THE FUTURE

Ecological restoration in the Cerrado is an invitation to connection and constant learning with nature. It is not a quick process; it is a journey of decades. By supporting and implementing restoration projects, we are returning the soil's vocation to sustain life. It is an ethical commitment to deliver a functional biome to the next generations, capable of providing water, climate regulation, and the beauty of the Brazilian savanna.



Golden Trumpet Tree (*Handroanthus albus*)

Strategic Connection: Restoration meets Innovation



THE CERRADO AS A LABORATORY OF THE FUTURE

When we think of innovation, the common image is sterile laboratories and digital technology. In the field, true innovation lies in reconciling human activity with natural cycles. Cerrado restoration emerges not as a return to the past, but as advanced social and biological technology to face the climate crisis. Innovating in restoration means breaking old "tree planting" paradigms to adopt complex, efficient, and socially just systems.

THE *MUVUCA*: RESILIENT AND LOW-COST TECHNOLOGY

The greatest recent technical innovation in Cerrado restoration is direct seeding, popularly known as "*muvuca*." Unlike planting seedlings (which requires nurseries, expensive transport, and intensive labor to dig holes), the *muvuca* mimics nature's intelligence.

Researchers like Isabel Belloni Schmidt (UnB) have demonstrated that mixing seeds from dozens of native species (herbs, shrubs, and trees) and spreading them on the soil creates positive competition and rapid ground cover. "Direct seeding has proven to be an effective technique for overcoming the Cerrado's biotic and abiotic filters, presenting significantly lower costs compared to planting seedlings, making it a crucial innovation for large-scale restoration" (SCHMIDT et al., 2019).

How does the community innovate in this case? They stop being merely "planting labor" and become managers of a living genetic bank, learning to process and store seeds, optimizing restoration logistics.

SOCIAL INNOVATION: SEED NETWORKS

The most potent innovation in the Cerrado is the social arrangement. Restoration does not happen without people. The *Rede de Sementes do Cerrado* (RSC) model is a global success example. Danilo Urzedo, a researcher at the University of Sydney, Australia, who studies the political economy of restoration in the Amazon and Cerrado, argues that seed network initiatives represent new environmental governance.

"Seed networks transcend ecological technique; they are social innovations that redistribute power, value traditional knowledge, and generate income for local communities, transforming restoration into an inclusive supply chain" (URZEDO et al., 2019).

TECHNOLOGICAL ALLIES IN RESTORATION



Collaborative Mapping: Communities use GPS and mobile apps to map mother trees.



Traceability: Creation of systems that guarantee the origin and genetic quality of the seed, adding value to the final product.

THE ECONOMICS OF RESTORATION: GENERATING VALUE FROM THE STANDING FOREST

For restoration to succeed, it must be economically viable. Innovation lies in viewing the restored area as an Agroforestry System (SAF) or a sustainable management area.

Pedro Brancalion (ESALQ/USP) defends the concept that restoration should be seen as an investment that generates returns. "Forest restoration should not compete with agriculture, but integrate with it. The innovation lies in designing multifunctional landscapes where restoration provides ecosystem services (water, pollination) that increase neighboring agricultural productivity and generate timber and non-timber products" (BRANCALION et al., 2019).

HOW CAN COMMUNITIES INNOVATE THEIR PROCESSES?



Smart Intercropping: Planting short-cycle species (beans, pumpkin) between restoration rows in the first few years to ensure food security and immediate income while the Cerrado grows.



Local Processing: Not just selling the raw fruit (e.g., *pequi* or *baru*), but processing it within the community (flours, oils, liqueurs), retaining economic value in the territory.

THE PATH OF COMMUNITY INNOVATION

For Cerrado communities, success in restoration depends on three pillars of innovation:



Network Organization: Forming cooperatives or associations to gain scale in the sale of seeds and socio-biodiversity products.



Hybridization of Knowledge: Uniting ancestral knowledge about fruit maturation times with academic science regarding dormancy and germination.

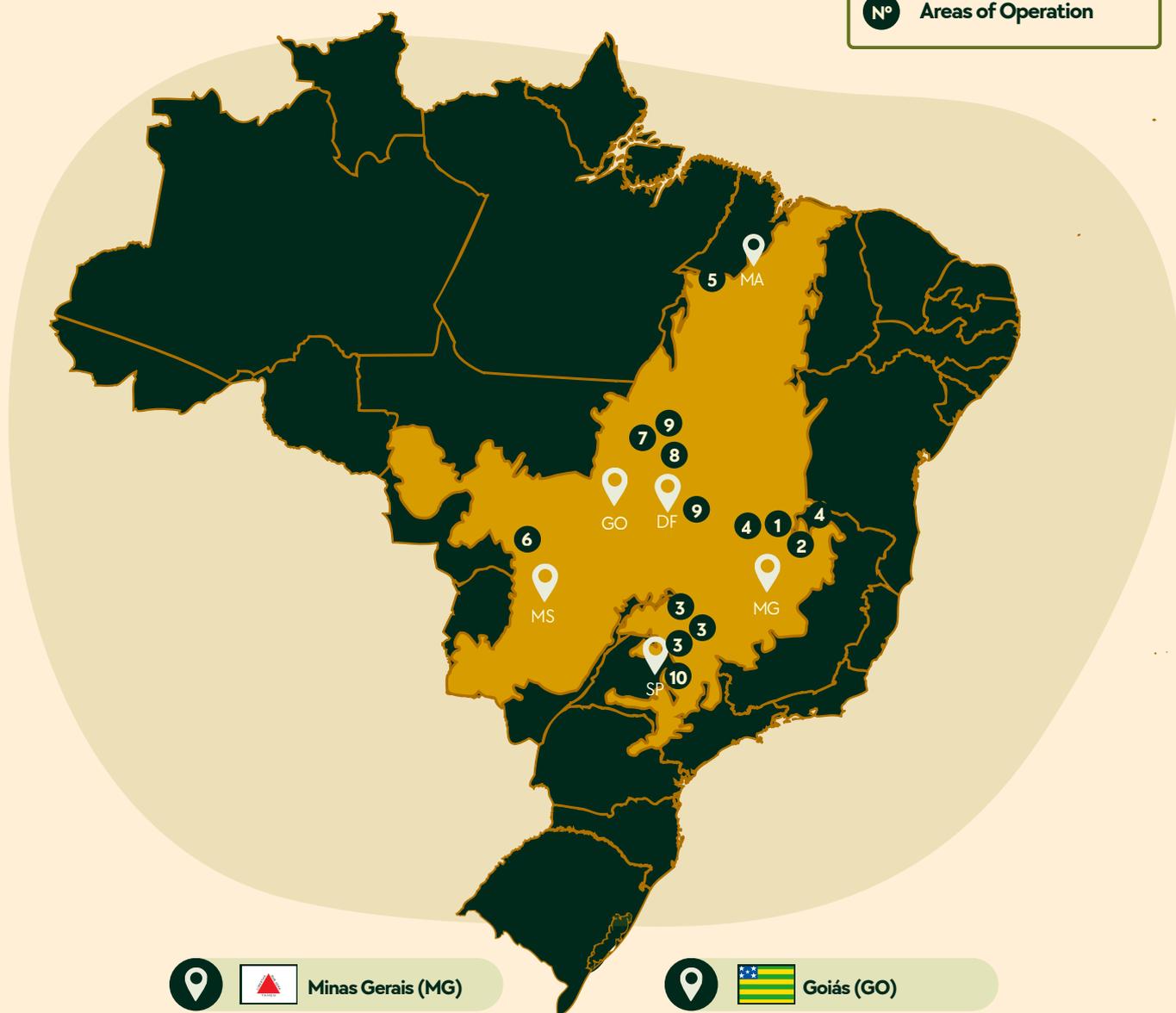


Participatory Monitoring: Encouraging youth in the community to monitor the growth of restored areas using technology (photography, basic drones) to validate results and attract investors or payments for ecosystem services.



TERRITORIAL MAP OF INNOVATIVE ORGANIZATIONS

 Headquarters of the Organizations
 Areas of Operation



  **Minas Gerais (MG)**

- 1 **Coperuaçu:** Peruaçu Valley (North of Minas Gerais)
- 2 **Instituto Ekos Brasil:** Peruaçu Valley (North of Minas Gerais) & Paraíso (São Paulo)
- 3 **Cerrado das Águas Consortium:** Quebranzuela River Basin (Patrocínio, MG), Triângulo Mineiro, and Alto Paranaíba
- 4 **Instituto New Era:** Peruaçu Valley (MG) and Alto Rio Pardo

  **Goiás (GO)**

- 7 **Cerrado de Pé:** Chapada dos Veadeiros (GO)
- 8 **Instituto Pouso Alto:** Chapada dos Veadeiros (GO)

  **Distrito Federal (DF)**

- 9 **Rede de Sementes do Cerrado:** Chapada dos Veadeiros, Alto São Bartolomeu (DF/GO)

  **Maranhão (MA)**

- 5 **COOSERT:** Baixada Maranhense

  **São Paulo (SP)**

- 10 **Ekos Brazil Institute:** Paraíso, São Paulo (SP)

  **Mato Grosso do Sul (MS)**

- 6 **CEPPEC:** Andalucia Settlement (Nioaque, MS)



Techniques of Restoration in the Cerrado



Techniques of Restoration in the Cerrado



If in the first chapter we understood the "why," we will now dive into the "how." Restoring the Cerrado requires overcoming the old idea that it is enough to dig a hole and place a seedling. The biome is complex, with severe dry seasons and acidic soils. To overcome these challenges, modern restoration unites the precision of ecological science with the wisdom of those who live on the land.

Below, we present the technical innovations that are revolutionizing how we recover the most biodiverse savanna on the planet.

SCIENTIFIC AND TECHNICAL INNOVATIONS

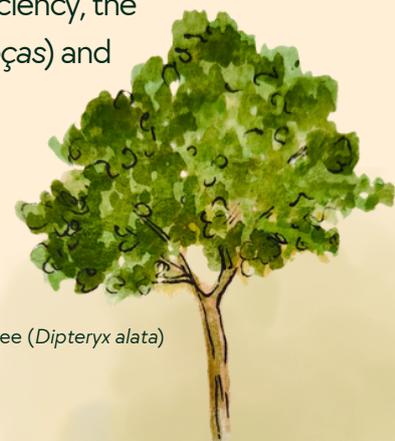
Restoration has ceased to be a matter of trial and error and has become a precision science. The focus has shifted: instead of just counting the number of trees planted, we look at landscape structure and ecosystem functionality.

THE SCIENCE OF *MUVUCA*: DIRECT SEEDING AND ANCESTRAL RESCUE

Also called direct seeding, the *muvuca* of seeds is perhaps the most innovative social and ecological technology applied to the Cerrado in recent years. It consists of mixing seeds from dozens of native species—trees, shrubs, grasses, and herbs—with sand or loose soil, spreading this mixture directly onto prepared ground.

Why is this innovative? Because it mimics natural succession. According to Schmidt et al. (2019), direct seeding presents significantly lower implementation costs than planting seedlings and allows for a much higher plant density (up to 10 times more plants per hectare).

This "organized chaos" creates positive competition: plants grow together, shading the soil quickly and preventing the return of invasive grasses. Beyond technical efficiency, the *muvuca* is an ancestral rescue. It harks back to traditional swidden systems (*roças*) and Indigenous management, where diversity is the key to survival.



Baru tree (*Dipteryx alata*)

THE KEY INSIGHT

In *Muvuca*, "green manure" species (such as jack bean or sunn hemp) are used mixed with natives. They grow fast, fix nitrogen in the soil, and die quickly, leaving the "bed" ready for the Cerrado to be born.



Muvuca (high-diversity seed mix)

THE ROLE OF NATIVE GRASS: BREAKING TABOOS AND SECURING WATER

Historically, restoration projects committed a grave error in the Cerrado: "forest bias." Attempts were made to create dense forests where nature originally created fields and savannas. Science today recalculates this route.

One of the leading authorities on Cerrado ecology, Giselda Durigan, warns that neglecting the herbaceous stratum (formed by native grasses and herbs) condemns restoration to functional failure (DURIGAN, 2020). The Cerrado is a "two-story" biome: the upper layer (trees) and the lower layer (grasses and shrubs).

Why is native grass

technology?



The Cerrado Sponge: Grass roots form a dense tangle, like a web. This structure "binds" the soil, preventing erosion, and creates pathways for rainwater to descend to the depths, securing water for springs and rivers.

Identity: Without native grass, the sun hits the bare soil directly or favors the entry of *Brachiaria* (invasive African grass), the great enemy of restoration.

Innovating in restoration means including seeds of *Aristida*, *Trachypogon*, and other native grasses in the *muvuca* mix. Restoring the "ground" (soil) is as vital as restoring the "roof" (tree canopies).

SEED PROCESSING: MUCH BEYOND COLLECTING

For the *muvuca* to happen, there must be seeds. And quality seeds are not found on supermarket shelves: they come from careful collection in the wild. This is where the innovation of community technical processing enters.

Collector communities do not just gather seeds: they apply complex botanical knowledge. It is necessary to know:



Breaking Dormancy: Some Cerrado seeds, like *jatobá*, need to be sanded (mechanical scarification) to germinate. Others need thermal shock.



Storage: Knowing the correct humidity is crucial so the seed does not attract fungi or die.

According to Urzedo et al. (2022), seed networks operate as citizen science laboratories. Collector families monitor phenology (flowering and fruiting times), adapting to climate change in real-time. Furthermore, processing adds economic value. Selling clean, tested seeds ready for planting generates dignified income and keeps the forest standing, transforming restoration into a solid supply chain.



Direct seeding of cajuzinho-do-Cerrado
(*Anacardium humile*)

The Force of Networks and Partnerships



Everlasting flower
(*Paepalanthus chiquitensis*)

CENTER FOR PRODUCTION, RESEARCH, AND CAPACITY BUILDING OF THE CERRADO (CEPPEC)

Sustainable Development Goals (SDGs)



Founded: 2019

Headquarters: Assentamento Andalúcia, s/n, lot 36, Rural Zone. CEP: 79220-000.

Focus: Extractivism, ecological restoration, spring protection, and strengthening female leadership in the Cerrado.

Contact: +55 (67) 99641-7596 | ceppec.cerrado@gmail.com

PRESENTATION

The Center for Production, Research, and Capacity Building of the Cerrado (CEPPEC) is a community space dedicated to strengthening socio-biodiversity, training, and local organization in the biome. In this space, groups and networks with strong female leadership conduct training, knowledge exchanges, productive activities, and the commercialization of Cerrado fruits, uniting income generation, territorial care, and the valorization of local lifestyles.

FEATURED PROJECT



Strengthening Extractivism and the Baru Chain: Supported by Central do Cerrado and articulated with Rede Cerrado.



Ecological Restoration and Spring Protection in the Cerrado: Financed by the Critical Ecosystem Partnership Fund (CEPF), with support from ECOA – Ecology and Action.

HISTORY

The initiative emerged from the collective organization of settled families, especially extractivist women, as a response to the need to generate income, strengthen community autonomy, and value the biome. The context was marked by environmental degradation and the invisibility of local knowledge, demanding recognition of the central role of women in conservation and socio-biodiversity management.

Throughout its trajectory, the Center expanded its operations by working with strategic networks, such as Rede Cerrado, Central do Cerrado, and the Flor do Cerrado Seed Network, strengthening extractivism and the marketing of native products. From 2016 onwards, it structured ecological restoration and water security actions, focusing on spring protection and natural regeneration of degraded areas. Thus, a model integrating production, conservation, citizen science, and traditional knowledge was consolidated.

CHALLENGES

The central challenge for CEPPEC was to transform the local productive mindset, breaking away from the 'clean field' logic to demonstrate, in practice, that keeping trees standing bolsters extractivism and that investing in ecological restoration also generates income, security, and quality of life. Compounding this process are the increasing impacts of climate change, which demand constant adaptation of productive and restoration strategies, alongside a permanent effort to ensure that women and families remain at the forefront, even in the face of economic and territorial pressures.

FEATURED PROJECT



Seeds of Autonomy: Strengthening the Foundations of Ecological Restoration



At CEPPEC, women's leadership goes beyond discourse: it is formally assured. The organization's statute guarantees female leadership, recognizing that women's historical role in managing socio-biodiversity is vital for Cerrado conservation. This inclusive governance strengthens family autonomy and places the female perspective at the center of strategic decisions about the territory.

INNOVATION



Governance: Consolidation of an institutional model that unifies environmental conservation and community organization.



Knowledge: The appreciation of local wisdom integrated with environmental care, moving beyond traditional production models.



Collaborative work: Valuing local knowledge integrated with care for nature, while breaking with traditional logic about production.



"The lucidity of the women's desire to produce food for families and communities to generate income and feed the fauna reveals the importance of their work, which deserves recognition and support."

Nathalia Eberhardt Ziolkowski | Director and President of ECOA and Executive Secretary of the Network of Women of the Cerrado and Pantanal

CHAPADA DOS VEADAIROS SEED COLLECTORS ASSOCIATION (CERRADO DE PÉ)



Pequi flower (*Caryocar brasiliense*)

Sustainable Development Goals (SDGs)



Founded: 2019

Headquarters: Abílio Domingues Street, square 31, lote Parte da APM, Novo Horizonte, Sector, Alto Paraíso de Goiás (GO), CEP: 73770-000

Focus: Ecological restoration of the Cerrado biome via native seed collection, income generation for traditional communities, and environmental education.

Contact: +55 (62) 99901-7268 / (62) 99161-2427 | cerradodepe@gmail.com

Website: cerradodepe.org.br

PRESENTATION

The largest network of native grass seed collectors in Brazil, the Cerrado de Pé Association (ACP), is headquartered in Chapada dos Veadeiros — the cradle of waters and a strategic region for biodiversity.

The group mobilizes about 240 families in five municipalities. Its mission connects ecological restoration to income generation, transforming local communities into guardians of the biome.

INITIAL CHALLENGES

The work faced the invisibility of the herbaceous stratum, as traditional restoration prioritized trees and ignored native grasses, which are vital for water security. In addition to the technical gap in managing these species, there was the challenge of converting communities historically linked to mining and charcoal into conservation agents, proving that keeping the Cerrado standing is synonymous with income and dignity.

FEATURED PROJECT



The consolidation of the **Chapada Restoration Chain** is the major milestone of the ACP (Association Cerrado de Pé). The project meets the direct demand for the recovery of the Chapada dos Veadeiros National Park and surrounding areas.



Although collection involves entire families, women play a central role in the curation and processing of seeds. The activity offers an autonomous and flexible source of income, fundamental for female heads of households in settlements and Quilombola communities.

INNOVATION



Rescue of the "Ground-Layer Cerrado" (Cerrado Rasteiro): ACP innovated by systematizing knowledge about species previously generically called "wild grass" (*Trachypogon spicatus*). Today, varieties like *rabo de burro*, *fiapo*, and *brinco de princesa* are cataloged and valued.



Social Technology: The model unites technical demand (restoration of ecosystem functions) with traditional knowledge, creating collection protocols that ensure the natural regeneration of donor areas.



"It's a muvuca (mix/crowd) of people to collect, muvuca of people to plant, muvuca of people to do maintenance, muvuca of partners. So it's muvuca everywhere. So this name, muvuca, fits very well with the work we do."

Claudio de Almeida Cortes | Founder of the Cerrado de Pé Association

CERRADO DAS ÁGUAS CONSORTIUM (CCA)

Sustainable Development Goals (SDGs)



Arabica Coffee (*Coffea arabica*)

Founded: 2019

Headquarters: Rua Pinto Dias, 171, apt 101, Centro, Patrocínio (MG), CEP: 38742-266

Focus: Institutional engagement, restoration, climate-smart agricultural practices, and efficient water resource management.

Contact: +55 (34) 99775-0014 | consorcio@cerradodasaguas.org.br

Website: cerradodasaguas.org.br

PRESENTATION

A collaborative platform uniting companies, government, and civil society to combat climate change through the **Conscious Producer Investment Program**. Based on science, the Consortium supports rural producers in the transition to smart agriculture, providing strategies and technologies that integrate productive areas and native vegetation to ensure water security and climate resilience throughout the region.

FEATURED PROJECT



Regenerative Landscape Corridors of the Cerrado Mineiro, supported by the Critical Ecosystem Partnership Fund.

EVOLUTION

The initiative was born from the union of science and conservation to address climate change. Based on a 2004 study by Professor Eduardo Assadi, which warned of the risk of Arabica coffee disappearing due to rising temperatures, the group began mobilizing in 2010. Formally established as a legal entity in 2019, the Cerrado das Águas Consortium (CCA) has expanded its operations significantly, growing from four founding institutions to its current 15 associates. Operating as a pre-competitive platform, the organization brings together major companies across the production chain—including the world's largest traders—to collaborate on natural resource management, transcending commercial competition. The central focus is the implementation of strategies in four watersheds within the Cerrado Mineiro, aiming to ensure the water security necessary for both continued coffee production and the supply of local communities. To execute its climate-smart agriculture actions, the consortium coordinates a robust network of partnerships. Financial and strategic support is provided by institutions such as CEPF, IEB, the Cargill Foundation, and BNDES (through the Floresta Viva call for proposals), while technical and operational validation is supported by Unifei, UFU, Sebrae, and local municipal governments.

INITIAL CHALLENGES

Difficulty in getting companies to announce joint actions and resistance from rural producers to projects, including refusing Payment for Ecosystem Services (PSA). Dialogue and overcoming competition among coffee growers were crucial to surmounting difficulties.



Signed in partnership with CEPF and IEB, the Gender Action Plan (2025–2030) aims to strengthen female leadership in environmental and agricultural management in the Cerrado Mineiro. The document establishes concrete goals to integrate gender policy into the Consortium's strategic planning. Objectives include ensuring women in leadership positions on the Deliberative Council by 2030, expanding female participation in events and the Conscious Producer Investment Program (PIPC), and ensuring the creation of a position dedicated to monitoring the topic and allocating specific financial resources for these actions.

INNOVATION



Action: Initial mobilization driven by major partners, such as Nespresso (which hired IUCN to lead work in the region), followed by the strategic adhesion of the Federation of Coffee Growers of the Cerrado Mineiro.



Adaptation: Complete restructuring of the approach methodology, based on lessons learned from an initial experience of low receptivity among rural producers.



Synergy: Effective support from municipal public authorities, which made human and financial resources available, facilitating dialogue and ensuring producer engagement in municipalities like Serra do Salitre (MG) and Coromandel (MG).



"Soil and water keep alive smart agricultural systems that sustain life and the economy."

Fabiane Sebaio | Executive Secretary of the Cerrado das Águas Consortium (CCA)

COOPERATIVE OF FAMILY FARMERS AND EXTRACTIVISTS OF THE PERUAÇU VALLEY (COPERUAÇU)

Sustainable Development Goals (SDGs)



Geraizeira woman
(Traditional community member from Northern Minas Gerais)

Founded: 2016

Headquarters: Januária (MG)

Focus: Sustainable agro-extractivism, processing of Cerrado fruits, collection and commercialization of native seeds, ecological restoration, and strengthening of family farming.

Contact: +55 (38) 9920-0561 | cooperuacu@gmail.com

PRESENTATION

A solidarity economy cooperative located in the surroundings of one of Brazil's richest areas in biodiversity and archaeology: the **Cavernas do Peruaçu National Park**. Composed of about 60 members, the Organization is a showcase of the territory's diversity, uniting Xakriabá Indigenous people, Quilombolas, Geraizeiros, and Veredeiros.

It operates on two main fronts: the integral use of Cerrado fruits (generating high value-added products like oils, pulps, and flours) and, more recently, the ecological restoration chain, supplying seeds and seedlings for biome recovery.

EVOLUTION

The cooperative's trajectory is marked by the transition from "struggle to cooperation". Formalization in 2016 was the apex of a prior collective movement, driven by the desire of communities in Januária, Itacarambi, and São João das Missões to protect their way of life. Initially focused on extractivism, Coperuaçu evolved its structure with strategic support from partners like WWF-Brazil and Caritas, moving from a reality of improvisation to acquiring its own headquarters, land, and machinery. Recently, the group took a strategic leap by entering the ecological restoration chain. Through the *Cerrado Vivo* project, the cooperative constructed a nursery capable of producing over 2,000 seedlings and trained its members in technical seed collection, consolidating Demonstrative Units of Productive Restoration in the region.

FEATURED PROJECT



Cerrado Alive: Restoring Landscapes and Inclusion: A partnership between the New Era Institute (INE) and CEPF to support traditional peoples in Northern Minas Gerais.

INITIAL CHALLENGES

The birth of the cooperative faced a scarcity of resources and the complexity of uniting different peoples (Indigenous, Quilombola, and farmers) under the same management model. Overcoming this occurred through a philosophy of "breaking walls and building bridges": the board and fiscal council adopted transparent and participatory management. Consequently, logistical and financial problems were treated as opportunities for collective learning rather than reasons for giving up.



Representing 80% of participation in the *Cerrado Vivo* project, women technically lead Coperuaçu's seed network. This leadership converts ecological restoration into financial autonomy and food security for families in the region.

INNOVATION



Intercultural Governance: The capacity to manage a business that unites different territorial identities (traditional peoples and family farmers) towards a common goal: defending the territory through sustainable production.



Chain Diversification (Restoration): The innovation of not just extracting fruit for food, but collecting seed to "plant forests." Structuring the sale of seeds and seedlings generated a new revenue stream of over USD 30,000.00 initially, proving that standing forests and restoration are viable economic assets.



High-Standard Processing: The development of products such as *pequi* sauce show value addition and *jatobá* flour break the stigma of "rustic" products and access new markets, ensuring the valorization of socio-biodiversity.



"In the beginning, we only had a small room. Everything came later. Today we have an industrial facility, land. They were arduous challenges, and we overcame them. Are there challenges? Yes, there are—and it's good that there are. Are challenges bad? No. Challenges are experiences to make concrete the goal we want to reach."

Roseli Vieira de Menezes Brito | Xakriabá Indigenous woman and Treasurer of the Farmers' Cooperative of the Peruaçu Valley (COOPERUAÇU)

LABOR AND TECHNICAL SERVICES COOPERATIVE (COOSERT)

Sustainable Development Goals (SDGs)



Coco babaçu (*Attalea speciosa*)

Founded: 1996

Headquarters: Rua do Alecrim, 511, Centro, São Luís (MA), CEP: 65.010-040

Focus: Technical assistance, community strengthening, productive restoration, and female leadership in rural territories.

Contact: +55 (98) 3232-2705 | coosert@yahoo.com.br

PRESENTATION

The Cooperative of Labor and Technical Services (COOSERT) is a community-based organization working to strengthen family farming, social organization, and sustainable development in rural territories.

Focusing on technical assistance, training, and the collective construction of solutions, the cooperative integrates productive restoration, socio-biodiversity, and female leadership, supporting communities, associations, and cooperatives in income generation, care for natural assets, and the valorization of local knowledge and lifestyles.

EVOLUTION

COOSERT's strengthening trajectory reached a major milestone in 2019 with the implementation of the first Agroforestry Systems (SAFs) through an INCRA technical assistance program. Since then, the organization has evolved by focusing on grassroots family strengthening, expanding reforestation and management actions in both collective areas and beneficiaries' backyards, consolidating the group around sustainable *babaçu* palm management.

FEATURED PROJECT



The Babassu Mesocarp Women: Promoting Sustainable Agroextractivism

INITIAL CHALLENGES

The organization's core mission, as expressed by its leadership, is the challenge of balancing community development with nature conservation. Their long-standing goal has been to foster income generation within communities without compromising the environment, proving that environmental stewardship is compatible with the economic sustainability of settled families.



The composition of COOSERT reveals an unquestionable female leadership, with 21 women and 4 men in its active base. This positive disproportion demonstrates that resource management, equipment operation, and women are mostly responsible for the care of productive home gardens, who lead the construction of local sustainability in practice.

INNOVATION

COOSERT's great innovation lies in its educational methodology, which goes beyond technical planting to incorporate workshops focused on popular education. Utilizing Paulo Freire's "Pedagogy of Alternation," the cooperative transforms restoration into a continuous learning process, where technical knowledge and social consciousness walk hand in hand.



Rock painting of the Cavernas do Peruaçu National Park

Sustainable Development Goals (SDGs)



Founded: 2001

Headquarters: Rua Desembargador Eliseu Guilherme, 200, 1st floor, Paraíso, São Paulo (SP), CEP: 04004-030

Focus: Articulation and community listening, biodiversity conservation, strengthening protected area (UC) management, ecological restoration, territorial governance, and socioeconomic integration of communities in conservation mosaics.

Contact: +55 (11) 95663-8319 | contato@ekosbrasil.org

Website: ekosbrasil.org

PRESENTATION

The Institute is an OSCIP (Civil Society Organization of Public Interest) that has acted for over two decades as a bridge between nature conservation and local development. The organization stands out for implementing innovative management models for protected areas and environmental recovery, seeking to reconcile biodiversity preservation with the economic viability of communities. Ekos operates under the premise that conservation is only effective when it generates shared value: integrating government, the private sector, and traditional populations into territorial governance.

FEATURED PROJECT



Sowing the Cerrado Biome (*Semeando o Bioma Cerrado*): An initiative focused on ecological restoration through the improvement of direct seeding and the strengthening of the native seed supply chain.

EVOLUTION

Founded in 2001, Instituto Ekos began its trajectory focused on preserving forest remnants and environmental education.

Over the years, the organization realized that protecting "islands" of biodiversity was not enough. It evolved into a landscape approach, taking on the challenge of supporting the management of large territories, such as the Sertão Veredas–Peruaçu Mosaic in northern Minas Gerais. This change in scale required new instruments. Ekos began developing management plans, advisory councils, and sustainable tourism strategies (such as in the Cavernas do Peruaçu National Park), consolidating itself as a national reference in public-private partnerships for conservation. Today, the organization leads projects that seek to scale up Cerrado restoration, uniting planting technology with social inclusion.

INITIAL CHALLENGES

In its early years, Instituto Ekos faced the challenge of building credibility in a field still under consolidation, proposing the integration of biodiversity conservation, responsible production, and income generation. It also needed to engage communities, producers, companies, and public authorities in collective solutions, overcoming initial distrust and separated views on conservation versus economic development. The Organization worked on structuring sustainable operational and funding models, ensuring the continuity of actions in the territories and the strengthening of productive chains aligned with conservation. Through the *Florescer no Cerrado* (Blossoming in the Cerrado) project, funded by CEPF, the institution recognizes women as protagonists of conservation, valuing their knowledge, strengthening their initiatives, and creating spaces for exchange, training, and mutual support. By caring for women, the community and the regeneration of the Cerrado are strengthened.



Through the *Florescer no Cerrado* project, funded by CEPF, the institution recognizes women as leaders in conservation, valuing their knowledge, strengthening their initiatives, and creating spaces for exchange, training, and mutual support. By caring for women, the community and the regeneration of the Cerrado are strengthened.

INNOVATION



Expansion beyond borders: Taking restoration "beyond the park," uniting Cerrado conservation with community development. This approach integrates nature protection with social well-being, strengthening those who live in the territory.



Integrated action network: The work connects nurseries, seed collection, and environmental education in a virtuous cycle of sustainability. By supporting local initiatives, it ensures that restoration generates practical value and promotes real engagement from residents.



Reality-connected solutions: Creating simple, practical solutions fully adapted to the reality of the territory. This methodology respects local knowledge and ensures that conservation practices are viable and lasting.



"Conservation of the Cerrado only happens if there is involvement from peoples and communities. That is why we expanded the Park's actions to the Cavernas do Peruaçu APA (Environmental Protection Area), uniting environmental protection with the needs and potentials of local communities."

Jessica Fernandes Pereira | Project Coordinator at Instituto Ekos Brasil

NEW ERA INSTITUTE (INE)

Sustainable Development Goals (SDGs)



Giant Armadillo (*Priodontes maximus*)

Founded: 2023

Headquarters: Avenida Domingos Português, nº 799, Jardim Florestal, Rio Pardo de Minas (MG), CEP: 39530-000

Focus: Socio-environmental development focusing on environmental conservation, ecological restoration, community strengthening, and promotion of sustainable initiatives with local communities and traditional peoples.

Contact: +55 (38) 99189-8019 | instituton.era@gmail.com

Website: institutonewera.org

PRESENTATION

A socio-environmental organization led by young people working on ecological restoration, environmental education, and sustainable development, strengthening communities and valuing traditional knowledge. Through participatory actions, it promotes nature conservation combined with income generation and care for territories, contributing to the construction of a fairer and more balanced future.

EVOLUTION

Instituto New Era was born from the need to defend the Cerrado and the people who live in and protect it. Despite being a recent initiative, the organization is consolidating itself through local actions that structure integrated socio-environmental projects, with the people of the territory as protagonists. Its actions foster productive ecological restoration, environmental education, and community strengthening, using participatory methodologies that unite conservation, income generation, and ancestral knowledge.

FEATURED PROJECTS



CERRADO VIVO Project: Productive and inclusive ecological restoration with traditional peoples and communities in Northern Minas Gerais supported by CEPF.



Environmental Awareness in Action Project: Environmental Awareness in Action Project, Support: Public Prosecutor's Office of Minas Gerais (MPMG).

INITIAL CHALLENGES

As a young organization, INE faces challenges related to resource scarcity, building trust within the territories, and the socioeconomic and climate adversities of the Cerrado. These obstacles are being overcome through constant dialogue with the communities, the strengthening of local partnerships, and the collective construction of solutions based on participatory processes.



With the support of CEPF/IEB, the New Era Institute develops training programs in partnership with COOPERUAÇU, covering themes such as rose production, grafting techniques, nursery management training, and grassroots communication. These actions encourage female leadership, income generation, and the creation of spaces for dialogue in decision-making processes, reaffirming the role of women as guardians of the territory and precursors of restoration.

INNOVATION



Integration of knowledge: Development of participatory socio-environmental projects that unite technical and traditional knowledge.



Youth Protagonism: Encouraging youth leadership in environmental management.



Social Technologies: Ecological restoration associated with the use of technologies for water conservation.

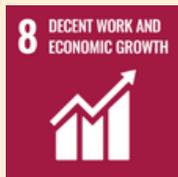


"For me, restoring the Cerrado is caring for the people who live in it. It is listening, building together, strengthening women, communities, and territories. When restoration is born from the people, it creates a future, generates autonomy, and keeps the Cerrado alive."

Beatriz Mendes Corrêa | Vice-President of Instituto New Era (INE)

POUSO ALTO INSTITUTE (IPA)

Sustainable Development Goals (SDGs)



Pequi (*Caryocar brasiliense*)

Founded: 2022

Headquarters: Rural area of the Pouso Alto region, Cavalcante (GO)

Focus: Biodiversity conservation, ecological restoration (water security), creation of private reserves (RPPNs), birdwatching tourism, and environmental education.

Contact: (62) 99870-3415

Email: institutopousoalto@gmail.com

Website: institutopousoalto.org.br

PRESENTATION

Located at the highest point of the Chapada dos Veadeiros, Instituto Pouso Alto (IPA) works on strategic biodiversity conservation and water security. Although young, the organization is born from its founder's consolidated experience in environmental advocacy, functioning as a hub for attracting partnerships and resources to the region. Its work integrates the creation of private reserves (RPPNs), the promotion of birdwatching tourism, and ecological restoration critical for urban supply and Kalunga communities.

INITIAL CHALLENGES

The organization faced a double barrier: technical and political. In the physical field, the challenge was restoring areas degraded by old sand dredging operations, where poor soil and severe drought made seedling survival difficult. In the social field, the greatest difficulty was accessing private properties in a scenario of distrust; it was necessary to disarm the resistance of farmers who viewed environmentalists as punitive inspectors rather than partners.

EVOLUTION

The Institute consolidated its practical operations through the "Rio Almas Vivo" (Living Almas River) project. Evolution stemmed from a detailed diagnosis ("The Path of Waters"), which combined geoprocessing with the local knowledge of rafting guides to map degradation from the National Park to the city. Overcoming the planning phase, the project moved to direct intervention, recovering 4 hectares of gallery forest in strategic spots. What began as an intention to plant evolved into "silent surveillance": the constant presence of the team in the field began to inhibit new deforestation and engage the community in protecting the river. Under female leadership, it integrated ecological restoration with community listening through a specific Gender and Conversation Circles axis.

FEATURED PROJECT



Rio Almas Alive: Restoring the Heart of Cavalcante's Waters, in partnership with CEPF.



Under female leadership, the project integrated ecological restoration with community engagement through a dedicated Gender pillar and 'Conversation Circles'. These forums for dialogue allowed the organization to gain deep insights into local residents' perceptions of environmental issues.

INNOVATION



Dialogue in focus: IPA innovated by shifting from enforcement to cooperation. Adopting a transparent approach and 'steady, persistent effort,' the technical team earned the trust of rural landowners, gaining access to lands previously off-limits to conservation.



Adaptive Technique: To conquer the sandy soil of dredging areas, the project applied solutions such as the use of hydrogel and mechanical irrigation with motor pumps, ensuring planting resilience in extreme conditions.

CERRADO SEEDS NETWORK (RSC)

Sustainable Development Goals (SDGs)



Pequi seedling (*Caryocar brasiliense*)

Founded: 2005

Headquarters: SCLN 210, bloco C, salas 208/214, Asa Norte, Brasília (DF), CEP: 70862-530

Focus: Community articulation, collection and commercialization of native seeds, ecological restoration (*muvuca*), income generation, and strengthening of traditional peoples and communities.

Contact: +55 (61) 3046-8869 | secretaria@rsc.org.br

Website: rsc.org.br

PRESENTATION

A non-profit civil association acting as a strategic link between biodiversity conservation and income generation for local communities. The organization structures the ecological restoration supply chain, connecting seed collectors (Indigenous peoples, Quilombolas, settlers, and family farmers) to the demand for recovering degraded areas. More than supplying inputs, the Cerrado Seeds Network (RSC) promotes "*muvuca*" (direct seeding) and fair trade, turning seeds into a tool for socio-environmental justice and the permanence of communities in their territories.

FEATURED PROJECT



Female Governance and Institutional Strengthening for Restoration: Conducted with support from CEPF and IEB.

EVOLUTION

RSC's first steps date back to the early 2000s, a critical period when the Cerrado was losing springs and biodiversity at an accelerated pace. In 2001, facing the urgency to halt deforestation, the understanding was established that "there is no restoration without seeds, and there are no seeds without people." Researchers, traditional communities, and partner organizations then began an initiative to protect the biome starting from its most basic element: native genetic material. Over two decades, RSC evolved from a resistance movement into a consolidated environmental governance structure. Today, the organization manages the *Reditário*, connecting various regional seed networks. Its operations expanded geographically to cover large patches of the biome, transforming collection—previously an informal activity—into a robust strategy for conservation and large-scale productive inclusion.

INITIAL CHALLENGES

The first obstacles were structural and cultural, such as creating efficient logistics for seeds in a continental biome and, principally, ensuring financial recognition for the collectors' work. The initial struggle was for the valorization of traditional knowledge and the guarantee of fair remuneration, proving to the market that the native seed is a product of high technological and social value, not just an extractivist by-product. With support from CEPF and IEB, the Female Governance and Institutional Strengthening for Restoration project boosts women's leadership in decision-making. RSC acts by valuing knowledge and ensuring autonomy, promoting an ecological restoration that is, at the same time, inclusive and rooted in the reality of the Cerrado.



"With the support of CEPF and IEB, the project Female Governance and Institutional Strengthening for Restoration drives women's leadership in decision-making. RSC operates by valuing local knowledge and ensuring autonomy, promoting an ecological restoration that is simultaneously inclusive and rooted in the reality of the Cerrado."

INNOVATION



Social Technology (The *Muvuca*): RSC was a pioneer in diffusing the seed *muvuca* (a mixture of seeds from various species with sand/soil) as a low-cost, high-biodiversity restoration technique, replacing traditional seedling planting on various fronts.



The *Reditário*: An innovation in the management model that connects different associations and collector groups under a logistical and commercial "umbrella," allowing small communities to access large buyers and restoration tenders.

Do-Do
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Participatory Governance: The construction of collective solutions for seed pricing and traceability, where communities themselves participate in the planning and execution of plantings, uniting ancestral knowledge with academic technique.



"The greatest innovation we have is inclusive restoration: communities and peoples are protagonists of restoration in their territories at every stage."

Maria Eduarda Camargo | Coordinator of the Restoration Nucleus of the Cerrado Seed Network (RSC)



Pequi tree (*Caryocar brasiliense*)



**WITHOUT WOMEN,
THERE IS NO CERRADO STANDING.**



Roseli Vieira de Menezes Brito: Xakriabá indigenous woman

**Rosana Sampaio and Alana Sampaio, two generations of restoration
Cerrado Production, Research, and Training Center (CEPPEC)**



**Claudio de Almeida Cortes, Seed Collector and Guardian of the Cerrado
Association of Seed Collectors of Chapada dos Veadeiros (ACP - Cerrado de Pé)**



**Fabiane Sebaio, biologist and environmental project manager
Cerrado Waters Consortium (CCA)**



Daygon Brito de Menezes, young restorationist and student at the Family Agricultural School Peruaçu Valley Family Farmers and Extractivists Cooperative (COPERUAÇU)



Babaçu nut breakers keep traditional ways of life alive
Labor and Technical Services Cooperative (COOSERT)



**Vicentina Bispo de Almeida Corte, 2 treasurer of the Pequi Hub “Núcleo do Pequi”
and Guardian of the Cerrado
Ekos Brasil Institute**



**Nondas Ferreira da Silva, Beatriz Mendes, Sueli Rodrigues e Manoel Pereira,
Guardians of the Cerrado from Northern Minas Gerais, in the Peruaçu Valley**



Emílio dos Santos Rosa, Guardian of the Cerrado
Pouso Alto Institut



Collaborative work with the muvuca seed-mix method is among the actions of the Cerrado Seeds Network (RSC)



BIBLIOGRAPHIC REFERENCES

BRANCALION, P. H. S. et al. Global restoration opportunities in tropical rainforest landscapes. *Science Advances*, v. 5, n. 7, eaav3223, 2019.

DURIGAN, G. Zero-deforestation agreements need to protect non-forest ecosystems. *Tropical Conservation Science*, v. 13, p. 1-6, 2020.

DURIGAN, G.; RATTER, J. A. The need for a consistent fire policy for Cerrado conservation. *Journal of Applied Ecology*, v. 53, n. 1, p. 11-15, 2016.

RIBEIRO, J. F. et al. (Ed.). Restauração ecológica de ecossistemas de Cerrado. Planaltina, DF: Embrapa Cerrados, 2011.

RIBEIRO, J. F. et al. (Ed.). Semeadura direta de espécies nativas para restauração ecológica no Cerrado. Planaltina, DF: Embrapa Cerrados, 2021.

SAMPAIO, A. B.; HOLL, K. D.; SCARIOT, A. Regeneration of seasonal deciduous forest tree species in long-used pastures in Central Brazil. *Biotropica*, v. 39, n. 5, p. 655-659, 2007.

SCHMIDT, I. B. et al. Defining restoration goals for the Brazilian Savanna: The need for a specific approach. *Restoration Ecology*, v. 27, n. 3, p. 490-498, 2019.

SOCIEDADE INTERNACIONAL PARA A RESTAURAÇÃO ECOLÓGICA (SER). Padrões Internacionais para a Prática da Restauração Ecológica. Washington, D.C.: SER, 2019.

URZEDO, D. I. et al. Indigenous and local communities as providers of native seeds: rethinking ecological restoration in the Xingu River Basin, Brazil. *Reforesta*, v. 1, p. 1-21, 2016.

URZEDO, D. I.; SAULS, L. A.; RAMOS-CASTILLO, A. The political ecology of seed networks: Producing environmental governance in the Brazilian Amazon and Cerrado. *Journal of Political Ecology*, v. 27, p. 19-38, 2019.