



TRADITIONAL FOOD SYSTEMS AND FOREST PRACTICES

The Living Agency of Indigenous Peoples and Local Communities in Facing the Triple Planetary Crisis

1. BACKGROUND

The Global Alliance of Territorial Communities (GATC) represents the Indigenous Peoples and Local Communities (IPs andLCs) of the world's major tropical forest regions: the Amazon Basin, Mesoamerica, the Congo Basin, and Indonesia.

The GATC functions as a political platform for IPs and LCs, representing 36 million people living in forest territories across 24 countries in Asia, Africa, and Latin America, who collectively defend over 958 million hectares of land. Together, these communities play a central role in biodiversity protection, the preservation of traditional knowledge systems, and the advancement of sustainable forest management practices.

In 2025, the GATC launched a global research initiative on Traditional Food Systems and Forest Management, coordinated through regional consultancies in collaboration with its member organizations. This process produced regional reports and case studies that highlighted the interconnections between food sovereignty and security, forest governance, and territorial management across the four forest basins.

Building on these findings, the GATC initiated the second phase of this process, focusing on synthesizing regional inputs into this Global Report and Policy Paper with recommendations designed to inform advocacy, communications, and political engagement leading up to the UNFCCC COP 30 and beyond.



2. EXECUTIVE SUMMARY



INTRODUCTION

The planet stands at an unprecedented crossroads, facing a triple planetary crisis of existential proportions: accelerating climate change, devastating biodiversity loss, and relentless land degradation.

This emergency is directly fueled by the current corporate food regime¹, a global system dominated by transnational corporations. This model is a major driver of global warming, as greenhouse gas emissions associated with food production, processing, and distribution account for approximately one-third of total global emissions².

Direct emissions from agro-industrial production also includes emissions from land-use change and deforestation, which drive the system's expansion³. The consolidation of this regime — prioritizing monoculture and standardization over diversity and ecology — represents a direct and existential threat to the food security and sovereignty of Indigenous Peoples and Local Communities (IPs and LCs).

Globally, it is estimated that 1.6 billion people depend directly on forests for their livelihoods⁴, reflecting the deep interconnection between forest ecosystems and community well-being. In this context, small-scale rural producers play a fundamental role, generating an estimated annual gross value between USD 869 billion and 1.29 trillion⁵, contributing significantly to global economies.

The small-scale economies operating within tropical forests, under IPs and LCs governance systems, play an essential role in global food security, as they are responsible for a significant share of the world's food supply. **It is estimated** that small producers feed 70% of the global population⁶.

However, this critical role is increasingly threatened by the climate crisis, which disrupts ecological cycles, reduces ecosystem productivity, and endangers the traditional livelihoods of communities that depend directly on forests.

Tropical forests constitute the planet's largest terrestrial carbon reservoir, playing an essential role in regulating the global climate. They are estimated to store around 50% of all carbon contained in global forest biomass⁷, making them a critical component of climate balance.

The total amount of carbon stored in forests is more than double the current amount of CO_2 in the atmosphere, underscoring their function as natural carbon sinks. However, deforestation and soil degradation not only halt CO_2 absorption capacity but also release vast amounts of previously stored carbon, exacerbating the climate crisis⁸.

Since ancestral times, IPs and LCs have been the primary guardians of the world's forests, preserving traditional knowledge that ensures ecological balance and the sustainability of their territories. Through processes of territoriality, both symbolic and material, customary governance systems, and community-based management strategies, they have made decisive contributions to the conservation of ecosystems that are critical for biodiversity and life on Earth.

Indigenous Peoples and local communities steward at least 50% of the world's land, much of which lacks formal titles or legal security. These areas include many intact and essential ecosystems, with evidence showing these lands house more – or an equal amount – species and experience lower deforestation rates than publicly or privately managed areas. Yet despite these contributions, nearly 60% of Indigenous Peoples lands across 64 countries face threats from industrial development, including projects related to creating clean energy.

This context highlights a direct link between land tenure security and food security: when communities lack formal recognition or legal and effective

protection of their territories, food insecurity increases, as long-term access and planning for agricultural and forest systems become restricted.

This document distills the findings of a global study on traditional food systems and forest practices of IPs and LCs, detailing their characteristics across regional contexts in the tropical forest zones represented by the GATC.

Three key messages are presented to scale up action and drive decisive political advocacy at COP30 and beyond. These messages are grounded in evidence that IPs and LCs are not passive actors in conservation — their living agency constitutes one of the most effective and integrated solutions to the triple planetary crisis: climate change, biodiversity loss, and land degradation.

The report underscores the indispensable role of traditional knowledge systems and IPs and LCs governance, calling for a profound shift in global climate policy: from mere recognition to direct investment and full, effective participation in decision–making — in favor of those who are the true guardians of the world's tropical forests.

KEY MESSAGES

Convened in Belém, at the heart of the Amazon, COP30 represents both a historic opportunity and an urgent imperative to forge effective synergies among the three Rio Conventions: the Convention on Biological Diversity (CBD), the United Nations Convention to Combat Desertification (UNCCD), and the United Nations Framework Convention on Climate Change (UNFCCC).

1. The traditional food systems and forest practices of IPs and LCs are the cornerstone for connecting the three Rio Conventions

The current corporate food regime is a major driver of the very crises the Rio Conventions aim to address: it contributes to deforestation and biodiversity loss (CBD), generates a substantial share of global greenhouse gas emissions (UNFCCC), and is a primary cause of land degradation (UNCCD).

In a global context urgently seeking effective and low-cost solutions to achieve climate goals, investing in the cultural processes and territorial governance frameworks of IPs and LCs stands out as the most promising path to promote environmental justice and transition toward sustainable futures.

To scale up action, the traditional food and forest systems of IPs and LCs must be positioned as a central strategy to weave synergies between climate adaptation and mitigation, biodiversity protection, and soil restoration—emphasizing that these traditional systems are not relics of the past, but living, dynamic forms of agency capable of confronting the climate crisis.

These traditional systems constitute a truly integrated solution to climate change, biodiversity loss, and land degradation by fostering dialogue between traditional knowledge systems and modern policy instruments for the sustainable management of natural resources¹⁰.

2. Elevate IPs and LCs governance frameworks and traditional knowledge systems as central to inclusive and just climate action

Protecting, strengthening, and value IPs and LCs governance frameworks not only supports conservation and sustainable management of tropical forest ecosystems—essential for global climate regulation, biodiversity protection, and land restoration—but also upholds a fundamental human right, recognized by international agreements that must be supported by coherent policy instruments¹¹.

By ensuring full participation and respect for territorial rights, including the principle of Free, Prior, and Informed Consent (FPIC), IPs and LCs can exercise active agency over their territories. This enables the scaling of traditional systems through participatory and culturally relevant climate adaptation and mitigation processes, effectively integrating ancestral knowledge and strengthening the resilience of both ecosystems and communities.

"Today, science confirms what our peoples have always known: we are the most effective guardians of biodiversity and of the natural systems that regulate our climate." 12

3. Prioritize Direct Financing to IPs and LCs including a focus on women and youth

Structuring Direct Financing to explicitly allocate resources to the leadership and agency of Indigenous and local women and youth is essential to advance gender and intergenerational justice.

This approach recognizes that women and young people play central roles in traditional food systems, ensuring the transmission of ancestral knowledge and the sustainable management of natural resources.

Allocate resources directly to women and youth, who are among the most vulnerable to the impacts of extractivism and climate change. Doing so not only addresses historical inequalities in access to climate finance, but also enhances the legitimacy of environmental policies, strengthening the agency of those on the front lines of defending territories and biodiversity.

Given the rising threats and violence faced by environmental defenders, ensuring safe and autonomous access to funding is indispensable to protect lives, territories, and the knowledge systems that underpin both climate action and environmental justice.

"We are ready for direct financing. We now have our own global, regional, national, and subnational financing mechanisms. All other financial instruments must be restructured and reimagined in partnership with us—to reflect our realities, uphold our agency, and support our priorities." ¹³





The tropical forests of the Amazon, the Congo Basin, Mesoamerica, and Indonesia, though geographically distant, are intrinsically connected through a network of ecological and climatic processes that transcend continental boundaries. These interconnections demonstrate that the health and vitality of one region have direct and systemic impacts on the others — and on the stability of the planet as a whole.

The way we produce food—combined with infrastructure expansion, pollution, and climate change—has been fragmenting landscapes, driving deforestation, biodiversity loss, and the disruption of ecosystem functions¹⁴.

From global climate regulation through water and carbon cycles, to species migration, global biodiversity, and the exchange of traditional knowledge among local IPs and LCs, forests operate as a deeply interconnected system. Recognizing and protecting these vital flows is essential to effectively address the triple planetary crisis of climate change, biodiversity loss, and land degradation.

Figure 1. Interdependencies among tropical forest regions

Source: Own elaboration

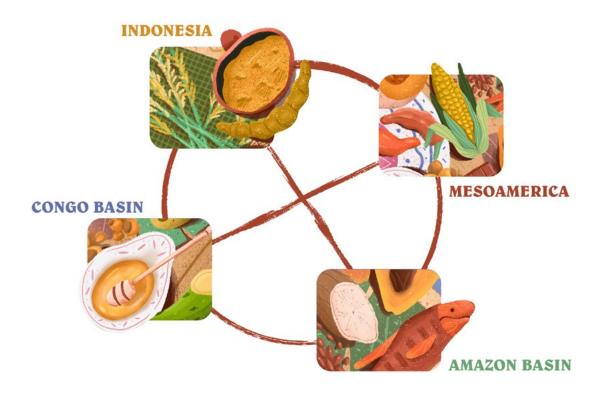


Table 1. Types of interdependencies and challenges among tropical forest regions

Source: Own elaboration

TYPES OF INTERDEPENDENCIES	CHALLENGES
Global Climate Regulation: Water Cycle, Carbon Cycle, El Niño and La Niña phenomenon	Climate Change (UNFCCC)
Species Migration and Global Biodiversity	Biodiversity Loss (CBD)
Ecological connectivity and land restoration	Land Degradation (UNCCD)
Regional exchanges of IPs and LCs Traditional Knowledge	Loss of Traditional Knowledge (UNFCCC, UNCCD, CBD)

In this context of profound planetary interconnection, traditional food systems and forest practices emerge as the tangible and culturally grounded expression of this interdependence. Far from being mere subsistence activities, these systems represent complex bodies of traditional knowledge, culture, and worldview woven over generations. They demonstrate that the protection of traditional knowledge is not only essential for preserving cultural processes but is synonymous with the protection of ecosystems themselves. Their intrinsic principles of agroecology, in-situ conservation, and sustainable resource management ensure the vitality and resilience of tropical forests.

Figure 2. Traditional Food Systems and Forest Practices Identified by the Five Regional Consultations

Source: Own elaboration based on regional consultation case studies



Traditional food systems and forest practices take on different names and forms across regions and cultures. In the Andes–Amazon systems such as the chagra and tul¹⁵ (found in Colombia, Ecuador, Peru, and Bolivia), as well as the conuco, (historically linked to the Andean Caribbean in Colombia, Venezuela, and Guyana), stand out. All of these systems are based on diversified cultivation plots that integrate forest rotation and regeneration cycles, combining crops such as cassava (bitter and sweet), tobacco, chili, coca, fruit trees, and medicinal plants. More than productive spaces, these are territories of life, where spirituality, reciprocity with nature, and intergenerational knowledge transmission ensure the continuity of ecological and cultural processes. They stand as pillars of sustainable land management throughout the Andean–Amazonian territories.

The roça is a traditional food system of the Rio Negro region in the Brazilian Amazon biome¹⁶. In this region, the 24 Indigenous Peoples who inhabit it practice this traditional system, equivalent to the chagra of the northwestern Amazon. Within it, cassava (Manihot esculenta) plays a central role as the most important food in the agro-food, social, and spiritual dimensions of local life. The roça represents a living expression of the spiritual, social, and ecological relationship between Indigenous Peoples and their territories, grounded in ancestral knowledge about soil cycles, forest regeneration, and reciprocity with nature. Passed down from generation to generation, this system has maintained biodiversity, food security, and sovereignty in one of the key areas of the Amazon biome.

In Mesoamerica, the Totonac milpa in Mexico and the practices of the Bribri-Cabécar peoples in Costa Rica represent living expressions of Indigenous Peoples traditional food systems¹⁷. The milpa, centered on maize cultivation, interacts with other species such as beans, squash, chili peppers, fruits, and wild herbs known as quelites. Together, they form a complex nutritional and spiritual food system that sustains community health and well-being. Similarly, the Bribri and Cabécar practice diversified land management, combining subsistence crops with forest and medicinal species in close alignment with the spiritual cycles of the land. Both systems embody an agriculture of balance, where food and territory intertwine as the foundation of food sovereignty and continuity of territorial processes.

In Indonesia, the Dayak Taman Indigenous Peoples food system in West Kalimantan and the ancestral agricultural system of Simbuang in South Sulawesi illustrate the ongoing vitality of traditional systems¹⁸. Rooted in collective experience and ecological wisdom, these systems remain essential pillars of local livelihoods and cultural processes. In Simbuang, rice fields are considered sacred and life-giving, protected by ancestral powers that ensure the fertility and spiritual balance of the territory. The sustainability of these systems is deeply tied to the interaction between customary laws, values, traditional knowledge, and Indigenous Peoples governance institutions, which function in a harmonious and integrated manner.

Meanwhile, in the Congo Basin, local communities implement diverse collaborative forest management systems that combine food production with for-

est conservation¹⁹. In the Central African Republic and Cameroon, examples of Collaborative Forest Management (CFM) demonstrate how participatory forest governance enables communities to develop climate adaptation strategies while protecting biodiversity. These approaches integrate ancestral knowledge, community land rights, and ecological sustainability, ensuring both food security and climate resilience, while positioning IPs and LCs as active agents in the conservation and sustainable management of their ecosystems.

Table 2. General Characteristics and Description of Traditional Food Systems and Forest Practices

Source: Own elaboration

GENERAL CHARACTERISTICS	DESCRIPTION
1. Inherent Agroecology	Based on agroecological principles (polyculture, crop rotation, intercropping, nutrient cycles), with no use of agrochemicals.
2. Agrobiodiversity Conservation	Integrated systems that combine animals, crops, and forests. They maintain and use a vast diversity of native seeds, local varieties, and wild species.
3. Central Role of Women	Women are the guardians of seeds, ancestral knowledge, and the daily management of traditional food systems, ensuring food security.
4. Intergenerational Knowledge Transmission	Youth play a key role in transmitting and adapting traditional knowledge, ensuring the continuity of practices across generations.
5. Organization of Labor	Labor is organized around principles of reciprocity and solidarity — such as Minga, Mutirão, Mano Cambiada, Bewawi, and Beburuh practices.

6. Management Based on Traditional Knowledge	They are guided by ancestral knowledge of natural cycles, climate, soils, and species behavior, as well as symbolic cultural processes such as ceremonies for sowing or harvesting, rituals for seed cleansing, spiritual protection, and understanding the lunar cycles.
7. More-than-human relationships	There are horizontal relationships between humans, plants, animals, spirits, and the environment, recognizing the agency, rights, and significance of non-human forces in life and in territorial governance.
8. Main Traditional Crops	Cassava in Brazil; Yuca, Tobacco, and Coca in the Amazon Basin; Maize in Mesoamerica; Rice cultivation in Indonesia.
9. Food Sovereignty and Security	Prioritize self-consumption and autonomy to produce healthy, culturally appropriate, and chemical-free food.
10. Collaborative Forest Management	Integration of agroforestry practices that promote forest regeneration, the use of non-timber forest products, and ecological connectivity.
11. Own and Solidarity- Based Economies	Encourage local exchange, value addition to forest products, and ethical marketing circuits. Intercultural markets are strengthened and created.

Traditional food systems and forest practices form the foundation of self-sustained economies that reinforce the autonomy, dignity, and resilience of IPs and LCs. Indigenous Peoples and community-based economies are grounded in care, solidarity-based exchange, product diversification, and value addition, sustainably using forest resources such as wild fruits, medicinal plants, handicrafts, and agricultural surpluses managed under bioeconomy principles²⁰. By consolidating regional value chains that reinforce urban-rural linkages²¹, dependence on volatile external markets is reduced, dependence on volatile external markets is reduced, generating benefits that are reinvested into community care, education, and territorial protection. In this way, self-sustained economies not only strengthen food sovereignty and security but also reinforce territorial defense strategies against extractive pressures and socio-environmental conflicts.

"Indigenous Peoples Economy is food production within the milpa, seeking well-being and respect for the environment. It is caring for our health, maintaining the diversity of the products we need to survive, and recognizing that, since the time of our ancestors, communities have practiced economic principles through bartering and seed saving to preserve species, protect biodiversity, and care for our shared home." 22

Traditional food systems constitute the vital core of family, territorial, and collective labor organization. More than agricultural plots, these systems embody a social, cultural, and political structure within ancestral territories and serve as the primary space for intergenerational transmission of knowledge and care practices. Work organization is based on reciprocity, solidarity, and mutual cooperation, through collective labor on family plots where community members participate in planting, weeding, and harvesting—exchanging effort for food, drink, and the strengthening of kinship ties. Examples include Minga, Mutirão, Mano Cambiada, Bewawi, and Beburuh, all of which ensure that food production remains a collective endeavor. Similarly, community-based forest practices are essential to IPs and LCs governance, as territorial management, resource distribution, and the exercise of authority are closely linked to the ecosystems they preserve.

Box 1: Bewawi and Beburuh — Collective Work and Mutual Support in the Traditional Food System of the Dayak Taman Meragun, Indonesia

Food management activities—both on land and in forests, from planting and cultivation to utilization—are still partially regulated through **community de-liberations** at the village level.

These deliberations encompass forest and land use, including areas such as **Temawakng** (former village sites rich in fruit trees and agroforestry systems), **Rima**' (sacred forest), and **Perantu** (ancient cemetery).

They also determine the start of the planting season, the **Gawe day** (thanksgiving or end-of-harvest celebration), and cooperative work such

as **Bewawi** (occasional collective work) and **Beburuh** (intensive or routine collective labor).

Bewawi consists of collective work carried out in one family's fields or gardens in rotation, where community members help with planting, clearing, or harvesting in exchange for meals, drinks, and the strengthening of family relationships. This system accelerates the completion of major tasks while ensuring that no family is left behind in the food production cycle.

Meanwhile, **Beburuh** is carried out on a more limited basis, reserved mainly for large or heavy tasks such as transporting crops, and is not performed routinely.

These two practices embody not only collective labor but also deep values of solidarity, equality, and sustainability. Men, women, and Indigenous youth participate actively according to their abilities, ensuring the continuity of the productive cycle.

Mutual cooperation, expressed through Bewawi and Beburuh, guarantees family food availability, strengthens social ties, and serves as the foundation of the Meragun community's food sovereignty.

The role of women is fundamental to the vitality of traditional food systems and forest practices. Women are transmitters of knowledge, community healers, everyday economists, and architects of collective care. Traditional food systems function as a vital axis where women serve as guardians of agrobiodiversity and ancestral wisdom, exercising effective control over the selection, preservation, and management of seeds. Strengthening these systems requires a strategic commitment to women's leadership and their political and economic agency. Investing in these systems ensures food sovereignty and security, perpetuates the transmission of ancestral knowledge, and affirms the central role of women in territorial and environmental decision–making — making their agency an essential condition for climate change adaptation and mitigation initiatives.

Intergenerational knowledge transmission is the backbone that guarantees the continuity of traditional food systems and forest practices. These traditional systems serve as comprehensive pedagogical spaces where learning extends beyond formal education and occurs through direct, hands-on experience. Elders transmit to children and youth the crucial knowledge of seed care and selection, crop cycle management, the use of medicinal plants, mastery of native

languages, and understanding of relationships with the beings and spirits of the territory. This experiential and contextual learning process ensures that the body of ancestral knowledge remains dynamic, adaptive, and culturally grounded — forming the primary mechanism for territorial defense.

Traditional food systems and forest practices embody knowledge that transcends the Western dichotomy between nature and culture. For Indigenous Peoples and Local Communities (IPs and LCs), the territory is not a mere inanimate resource but an interconnected web of multispecies relationships in which humans are only one component. This worldview implies a continuous dialogue with more-than-human entities — including animals, plants, fungi, geographical formations, and spiritual beings (such as forest or water spirits) — who are recognized as having agency and sovereignty over resources. Land management, planting, and harvesting are guided by principles of respect, seeking the permission of spiritual beings through rituals, dances, songs, and specific practices.

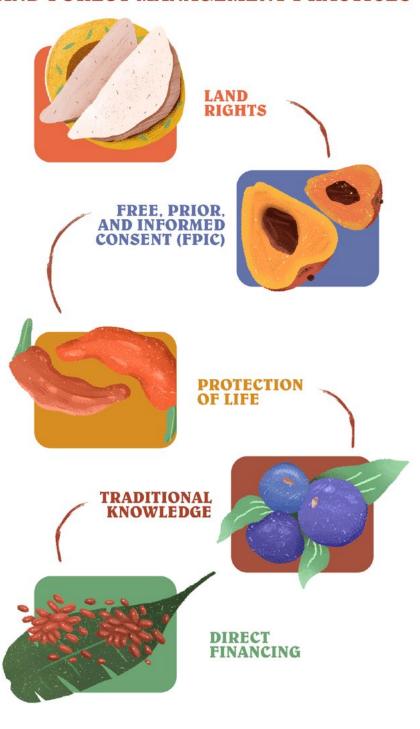
Traditional food systems and forest practices represent the tangible and territorial expression of the demands of the Global Alliance of Territorial Communities. The inherent characteristics of these traditional systems reflect and embody the principles and requirements upheld by the GATC. For example, agroecological management and the conservation of agrobiodiversity are only possible when communities fully exercise their Rights to Land, Territory, and Traditional Knowledge. Likewise, the structure of community organization and autonomous economies exemplify the need for Direct Financing to sustain self-determination. The very existence of these traditional systems represents the intrinsic value defended through FPIC (Free, Prior, and Informed Consent) and the Protection of Life. Safeguarding traditional systems means recognizing and validating the global demands advanced by the GATC.



Figure 3. GATC Demands within the Framework of Traditional Food Systems and Forest Practices

Source: Own elaboration based on the 5 Demands of the GATC²³

TRADITIONAL AGRI-FOOD SYSTEMS AND FOREST MANAGEMENT PRACTICES







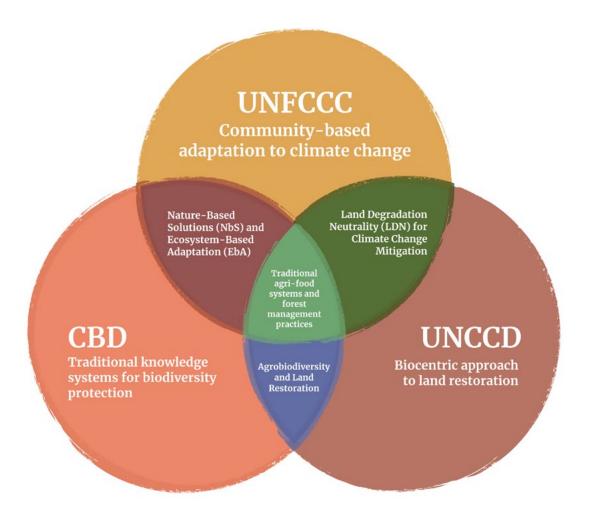
The transformation toward sustainable food systems emerges as a crucial nexus where the three Rio Conventions find meaningful synergies²⁴. Adopting approaches that value agrobiodiversity, promote agroecological practices, and reduce the ecological footprint of food production and consumption enables integrated action that protects ecosystems, sequesters carbon, and regenerates soils. Thus, reconfiguring food systems toward sustainability is not merely an option but an indispensable strategy to meet the interconnected objectives of the Rio Conventions.

The intrinsic connection between traditional food systems and forest practices and planetary health places the governance of Indigenous Peoples and Local Communities (IPs and LCs) at the center of international climate discussions. To respond to the Rio Conventions' call to articulate synergies and advance a holistic vision in the face of the triple planetary crisis, we propose a perspective grounded in traditional systems.

We identify key entry points for each convention: community-based climate adaptation (UNFCCC), the role of traditional knowledge in the conservation and sustainable use of biodiversity (CBD), and a biocentric approach to land restoration (UNCCD). This framework not only responds to international priorities but also deeply aligns with the worldview of many IPs and LCs, who understand life as a web of interrelationships among living beings and the territory. Additionally, traditional food systems offer valuable lessons on more sustainable food consumption patterns, demonstrating how to nourish both body and spirit in harmony with nature. Integrating these practices can help reduce the pressure exerted by conventional productivist systems and catalyze transformations toward sustainable food systems.

Figure 4. Entry Points of Traditional Food Systems and Forest Practices in Relation to the Rio Conventions

Source: Own elaboration



Community-based adaptation driven by IPs and LCs is a collective form of addressing the impacts of climate change and serves as an entry point for synergies with the United Nations Framework Convention on Climate Change (UNFCCC). This adaptation is not based on large-scale infrastructure but on the resilience of traditional food systems and forest practices. Practices such as the adaptive management of the chagra —which uses agrobiodiversity as insurance against droughts or floods— are living examples of Ecosystem-Based Adaptation (EbA). Similarly, traditional knowledge enables communities to monitor local indicators (such as plant flowering and fruiting, bird migration, leaf fall, the onset of rainy or dry seasons, and animal behavior) and adjust their agricultural cycles in real time in response to climatic variability. Community-based climate adaptation, by prioritizing IPs and LCs governance, strengthens ecosystem protection and the preservation of their functions as carbon sinks.

Box 2. The Totonac Milpa traditional system as a Nature-Based Solution (NbS)

The **Totonac milpa system** is a living model of how traditional knowledge operates as a Nature-Based Solution (NbS).

This ancestral polyculture, **centered on maize as the core of agriculture and community cultural processes,** is intercropped with beans, squash, and other species, alongside a diversity of medicinal plants and various shrubs.

In a dialogue of knowledges, milpa systems are also combined with the production of forest and agroforestry species, both timber and non-timber—such as pepper, cacao, and others—blending agricultural and forest production with a deep spiritual and community dimension. From the blessing of seeds and the phases of the maize cultivation cycle to the harvest, the milpa interweaves the bonds between society, culture, and territory.

The milpa strengthens climate resilience, conserves and manages biodiversity, and protects native seeds. In communities such as Totonacapan, women lead the planting and preservation of local varieties, ensuring food sovereignty amid climatic variability and uncertainty.

More than a cultivation method, the milpa is a school of life that transmits balance and reciprocity between communities and their territories — reaffirming the value of traditional knowledge and the leadership of women as pillars of community-based adaptation to climate change.²⁸

The protection of biodiversity through traditional knowledge systems constitutes a key entry point for generating synergies with the Convention on Biological Diversity (CBD). Indigenous Peoples and Local Communities (IPs and LCs) are the guardians of vast agrobiodiversity—seeds, animal breeds—and of the wild biodiversity that sustains tropical forest ecosystems. Their diversified cultivation practices, adaptive forest management, and belief systems that recognize multispecies relationships demonstrate that conservation is not an isolated act but an inherent outcome of their way of life. Protecting traditional systems represents a cost-effective and culturally appropriate strategy to achieve the objectives of the CBD, including in situ conservation and the sustainable use of biodiversity.

Through its **Article 8(j)**, the CBD explicitly recognizes the importance of "respecting, preserving and maintaining the knowledge, innovations and practices of Indigenous Peoples and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity."²⁵

Box 3: Cassava Agrobiodiversity in the Upper and Middle Rio Negro Region of the Amazon Biome, Brazil

The goals of halting biodiversity loss (CBD) and combating land degradation (UNCCD) converge in the practices of Indigenous women, who act as agents of **biocentric restoration**²⁹. Their knowledge of native seeds and soil regeneration cycles is essential for the health of the land.

In the **Tukano and Aruak** communities, the Roça serves as a space for production and conservation of agrobiodiversity, where Indigenous women are the guardians of seeds and agricultural knowledge. Their care for the diverse types of cassava (Manihot esculenta) ensures the crop's genetic diversity.

Their knowledge guides rotational periods—a practice that not only allows the land to rest but actively facilitates soil regeneration. This approach is intrinsically biocentric, as it prioritizes the health of ecosystems over short-term exploitation.

The **Rio Negro region** is home to approximately **140 varieties of cassava**, and each woman cultivates an average of 20 to 50 varieties.

Cassava is viewed from two perspectives: its nutritional dimension and its symbolic dimension within the cultural order.

Daughters inherit manivas (cassava cuttings) from their mothers when they marry and move to their husbands' villages, later inheriting more from mothers-in-law and sisters-in-law. Each woman's collection grows throughout her life through social networks of friendship, kinship, and neighborly exchange³⁰.

Agrobiodiversity is also intertwined with community rituals, such as in the **Tuyuka** (**Utapinopona**) tradition, where manivas and women share a common genesis, and the maniva accompanies each girl throughout her life, beginning at birth ing the value of traditional knowledge and the leadership of women as pillars of community-based adaptation to climate change.

Traditional knowledge systems and biocentric land restoration serve as an entry point for synergies with the United Nations Convention to Combat Desertification (UNCCD)²⁶. The goals of Land Degradation Neutrality (LDN) can only be fully achieved by transcending productivist approaches. Traditional systems of IPs and LCs, together with a biocentric approach to land restoration, prioritize soil and ecosystem health over short-term yields. Practices such as crop rotation or controlled slash-and-burn are not pauses in productivity, but active methods of soil regeneration that mimic the natural cycles of forests, recognizing the value of traditional knowledge. By viewing the land as a living, interdependent being, communities ensure that restoration strategies not only recover fertility but also strengthen the ecological and spiritual integrity of the territory, ensuring its long-term sustainability.



Box 4: Collaborative Forest Management and Intergenerational Knowledge Transmission in Baka Communities of Cameroon and the Central African Republic

Efforts to combat land degradation (UNCCD) and adapt to climate change (UNFCCC) depend critically on the intergenerational transmission of ancestral knowledge. In Baka communities of Cameroon and the Central African Republic, Indigenous youth play a key role in continuing traditional forest management practices.

Through dialogue with their elders, they learn sustainable forest management and non-timber forest product collection, strengthening their communities' food security. One example is the transfer of knowledge about the safe collection of wild mushrooms and yams. Among the Baka, it is believed that wild animals indicate which mushrooms are edible; without this wisdom, younger generations risk consuming poisonous varieties³¹.

Deforestation, land loss, and modernization fragment this living heritage of identity and social cohesion, threatening the transmission of knowledge. Likewise, insecure land tenure not only endangers livelihoods and the continuity of traditional practices but also forces youth to migrate to neighboring territories, creating potential conflicts.

Securing land rights is therefore fundamental to strengthening the agency of the younger generations as forest guardians—reinforcing land degradation neutrality, as well as climate adaptation and mitigation.



5. POLICY RECOMMENDATIONS FOR COP30

Recognizing the indispensable role of Indigenous Peoples and Local Communities (IPs and LCs) and their efforts to promote their traditional food systems and forest practices as integrated solutions to the triple planetary crisis²⁷.

This document puts forward a set of concrete recommendations. Directed at the international community—including governments, climate funds, and multilateral banks—these actions aim to strengthen synergies between the Rio Conventions and ensure that their implementation reflects and prioritizes the experience and governance of IPs and LCs. It is imperative to transform recognition into tangible, direct support, catalyzing climate, biodiversity, and land restoration action that is effective, just, and sustainable.

- 1. Elevate the governance frameworks and traditional knowledge systems of Indigenous Peoples and Local Communities, recognizing them as legitimate environmental authorities and central actors in climate action: Formalize and strengthen the authority and traditional governance systems of Indigenous Peoples (IPs) and Local Communities (LCs) within international climate action frameworks including multilateral agreements on climate, biodiversity, and restoration. This entails recognizing IPs and LCs as legitimate environmental authorities, on par with other governmental entities, and ensuring that their internal norms and traditional knowledge systems guide territorial and climate management. It is essential to promote harmonization between internal and external regulatory frameworks, as well as to build capacities for the sustainable, decentralized, and autonomous management of their territories.
- 2. Link direct financing to the agency of Indigenous and local women and youth: Explicitly linking direct financing to IPs and LCs with a gender and intergenerational approach is essential to guarantee just and sustainable climate action. It is necessary to move beyond traditional "conservation"

financing" models toward mechanisms that allocate a specific percentage of funds to strengthening the economic and community agency of women and youth in their territories.

- 3. Structural integration of traditional systems into long-term national, regional, and local policies and programs: Promote the institutionalization of traditional systems as structural pillars of public policies and local, regional, and national development programs. This requires recognizing and protecting ancestral forms of land use and territorial organization, ensuring that their guiding principles inform environmental management. Integrating these systems into institutional frameworks strengthens land and territorial rights, while also granting formal recognition to the authorities and governance mechanisms of IPs and LCs.
- 4. PromoteIndigenousPeoples,community-basedandsolidarityeconomies through the strengthening of value chains and intercultural markets, with safeguards to protect traditional agri-food systems. This entails recognizing and valuing the cultural, social, and economic contributions of traditional products, while establishing safeguards to prevent their undue appropriation or decontextualized commercialization. At the same time, revitalizing local and regional production and consumption circuits—through the strengthening of urban—rural linkages—helps ensure fair prices for producers, foster equitable exchanges, and guarantee access to healthy and culturally appropriate foods.
- 5. Strengthen protection mechanisms for environmental leaders from IPs and LCs and ratify existing international norms: It is recommended that States Parties and international organizations implement concrete measures to ensure the life and safety of environmental leaders from IPs and LCs, who play a central role in territorial governance, biodiversity conservation, and climate action. These measures should include legal protocols, early warning mechanisms, international assistance, and institutional support to prevent threats, violence, or criminalization. Furthermore, States are urged to ratify and implement existing international frameworks, such as the Escazú Agreement, which guarantees access to information, public participation, and the protection of those defending the environment.

6. Ensure full and effective IPs and LCs participation in international negotiation spaces, securing their agency in decision-making: Elevate the status and negotiating capacity of IPs and LCs working groups and platforms within the three Rio Conventions, guaranteeing their full and effective participation at all decision-making levels on resolutions that impact national policies of member states.

Box 5 – Institutionalization of the Program for the Strengthening of Chagras Conucos and Tul by the National Organization of the Indigenous Peoples of the Colombian Amazon³²

The Special Program for Indigenous Peoples Amazonian Agricultural and Rural Development – Chagra Viva, promoted by the National Organization of the Indigenous Peoples of the Colombian Amazon (OPIAC), and agreed upon through the Amazon Regional Roundtable with the active participation of ancestral and traditional authorities, Indigenous leaders, women, men, and youth representatives from the six departments that make up the Colombian Amazon, is an example of the institutionalization and articulation of synergies around traditional systems among Indigenous Peoples organizations, state agencies, and international cooperation partners.

This program not only promotes agrobiodiversity (CBD) and climate adaptation (UNFCCC), but does so through mechanisms of self-governance at local, regional, and national levels. The legitimacy of this initiative lies in its endogenous processes, designed by Indigenous Peoples communities and authorities for their own territories.

Institutionalizing programs under the principle of Free, Prior and Informed Consent (FPIC) ensures that decisions regarding territorial management and resource use reflect Indigenous Peoples social, cultural, and political structures — protecting them from the imposition of external projects that could undermine traditional systems.

Likewise, the institutionalization of this program is directly linked to the Protection of Life of environmental and traditional system defenders. This occurs in a context of armed conflict, fueled by illicit economies tied to drug trafficking, illegal mining, and deforestation.

The protection of life is essential for the continuity of traditional practices, making **environmental peacebuilding in Indigenous Peoples territories** the enabling condition for effective climate change adaptation and biodiversity conservation.

6. A CALL TO ACTION

Indigenous Peoples and Local Communities are not passive victims of the climate, ecological, and food crises — they are living protagonists of the solutions our planet urgently needs. Their agency, their agro-food systems, and their traditional forest practices embody the wisdom and action that can guide a global transition toward climate and social justice.

COP30 must be a historic turning point to advance a decolonial vision of agrofood systems. It is time to move from symbolic recognition to transformative action, from discourse to direct financing, and from consultation to genuine co-governance. Protecting traditional systems is not only an ethical duty but a condition for planetary survival.

We issue an urgent call to States, multilateral organizations, climate funds, and global civil society to:

- **Recognize and institutionalize** traditional agro-food systems and forest practices as integrated solutions to the triple planetary crisis.
- Channel direct, agile, and secure financing to Indigenous Peoples and Local Communities, with a focus on women and youth.
- Ensure the full and effective participation of Indigenous Peoples and Local Communities at all levels of decision–making within the three Rio Conventions.
- Protect the lives of land and environmental defenders as an indispensable condition for climate action and peace with nature.

The future of humanity depends on the world listening to and acting alongside those who have cared for the Earth since time immemorial. From the Amazon Basin to the heart of Africa, from Mesoamerica to the forests of Indonesia, the voice of the IPs and LCs is a call to restore balance.

ENDNOTES

- McMichael, P. (2009). A food regime genealogy. The Journal of Peasant Studies, 36(1), 139–169.
- 2 Crippa, M., Solazzo, E., Guizzardi, D. et al. Food systems are responsible for a third of global anthropogenic GHG emissions. Nat Food 2, 198–209 (2021).
- 3 Intergovernmental Panel on Climate Change (IPCC). (2023). AR6
 Synthesis Report: Climate Change 2023. Summary for Policymakers.
- Food and Agriculture Organization of the United Nations (FAO). (2020). The State of the World's Forests 2020: Forests, Biodiversity and People. Rome: FAO.
- Verdone, M. 2018. The world's largest private sector? Recognising the cumulative economic value of small-scale forest and farm producers. International Union for Conservation of Nature.
- 6 International Land Coalition. (2023). World Food Day: Indigenous
 Peoples and local communities mobilize to protect food sovereignty and
 biodiversity. International Land Coalition.
- FAO. 2022. The State of the World's Forests 2022. Forest pathways for green recovery and building inclusive, resilient and sustainable economies. Rome, FAO.
- 8 Intergovernmental Panel on Climate Change (IPCC). (2023). AR6
 Synthesis Report: Climate Change 2023. Summary for Policymakers.
- 9 Larson, A. (2022). Land rights of indigenous peoples and local communities. LandGap.
- 10 Rio Conventions Joint Capacity-building Programme. (2024). Enhancing the Role of Local and Indigenous Knowledge in Supporting Synergies Amongst the Rio Conventions. Infobrief 4.

- Rio Conventions Joint Capacity-building Programme. (2024). Enhancing the Role of Local and Indigenous Knowledge in Supporting Synergies Amongst the Rio Conventions. Infobrief 4.
- 12 Global Alliance of Territorial Communities (GATC). (2025). Brazzaville

 Declaration: Our Commitment to Peoples, our Territories, Planet, and

 Partnership: A Unified Path to COP30 and beyond. Brazzaville, Republic

 of Congo. Page 2.
- 13 Global Alliance of Territorial Communities (GATC). (2025). Brazzaville
 Declaration: Our Commitment to Peoples, our Territories, Planet, and
 Partnership: A Unified Path to COP30 and beyond. Brazzaville, Republic
 of Congo. Page 3.
- 14 UNCCD and CMS. (2025). Global Land Outlook Thematic Report on Ecological Connectivity and Land Restoration. UNCCD and CMS, Bonn.
- 15 Case Studies for the Amazon Basin.
- 16 Case Studies for Brazil.
- 17 Case Studies for Mesoamerica.
- 18 Case Studies for Indonesia.
- 19 Case Studies for the Congo Basin.
- Leserfants, Y., Veprinsky Mehl, A., Muggah, R., Aguirre, K., Smith, P.
 C. (2024). Re-Imagining Bioeconomy for Amazonia. Inter-American Development Bank.
- 21 UNCCD and UN-Habitat (2024). Primer on Urban-Rural Linkages and Land. Bonn, United Nations Convention to Combat Desertification and Nairobi, UN-Habitat.
- Alianza Mesoamericana de Pueblos y Bosques (AMPB). (2023). Economía Indígena y Comunitaria en Mesoamérica. Experiencias desde la AMPB. Página 13.

- 23 See: Global Alliance of Indigenous Peoples.
- 24 WWF (2024), Aligning the Rio Conventions for Sustainable Food Systems Transformation. WWF, Gland, Switzerland.
- 25 Convention on Biological Diversity. (1992). Convention on Biological Diversity. Article 8(j). Retrieved from https://www.un.org/es/observances/biodiversity-day/convention
- 26 <u>United Nations Convention to Combat Desertification. (2022). The Global Land Outlook, 2nd Edition.</u>
- 27 Rio Conventions Joint Capacity-building Programme. (2024). Enhancing the Role of Local and Indigenous Knowledge in Supporting Synergies Amongst the Rio Conventions. Infobrief 4.
- 28 See: FAO website
- 29 See: https://www.fao.org/indigenous-peoples/pillars-of-work/ indigenous-peoples--knowledge-and-climate-change/indigenous-peoples--biocentric-restoration/
- França, L. Comer e Viver: o sistema alimentar indígena do Rio Negro.

 Tese de Doutorado. Programa de Pós-Graduação em Antropologia Social.

 Universidade Federal de Santa Catarina. 2023.
- 31 Case Studies for the Congo Basin.
- Organización Nacional de los Pueblos Indígenas de la Amazonía Colombiana (OPIAC). (2025). Programa especial de desarrollo agropecuario y rural indígena amazónico. Coordinación de Mujer, Familia y Niñez, Agencia de Desarrollo Rural.