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Climate justice, forests, and Indigenous Peoples: toward an alternative to REDD + for the Amazon

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1 Introduction

There is an urgent need for coordinated international action to curb global emissions, and reducing deforestation is key in this effort. Tropical primary forests like the Amazon are critical to the regulation and functioning of Earth's climate; they are a significant source of carbon emissions when destroyed and are also important sinks, containing more than 100 billion metric tons of carbon (Phillips et al. 2017). We are rapidly approaching the 20% threshold of Amazon rainforest loss that climate models predict will trigger irreversible ecosystem decline and push the planet to a climatic tipping point (Science Panel for the Amazon 2021; IPCC 2022). These forests are increasingly threatened by commercial and extractive activities, with Indigenous territories often serving as holdouts of forest protection (Walker et al. 2020). A growing body of evidence shows the importance of formally securing Indigenous land rights and Indigenous territorial self-determination for climate change mitigation and tropical forest conservation (IPCC 2022; Pacheco and Meyer 2022). However, the importance of Indigenous Peoples in the protection of the Amazon is not reflected in the design of international climate policy and climate change mitigation strategies. This paper analyzes climate mitigation efforts through the lens of climate justice with a focus on Indigenous Peoples of the Amazon and puts forth a set of twelve principles toward a more just approach to combating deforestation in the Amazon.

Recognizing the high financial costs of addressing global climate change, many have looked to tropical forest countries of the Global South as a target for mitigation efforts due to the lower costs of land and labor (Stern 2007). As national policies in tropical forest coun-

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tries have had limited success in curbing deforestation, and at times even promote it, international programs such as UN REDD+ have increasingly used market-based mechanisms to incentivize forest protection. REDD+—a UN initiative that stands for Reducing Emissions from Deforestation and Forest Degradation in countries of the Global South—is the primary international effort employing financial incentives toward maintaining and increasing forest cover and forest carbon sequestration globally.

REDD+ aims to reward landholders and jurisdictions (ranging from municipalities to nation states) for reducing deforestation and forest degradation and the associated carbon emissions. It was originally presented as a low-cost strategy to reduce carbon emissions and redistribute financial resources from states and entities with high carbon emissions to less industrialized countries with more primary and threatened tropical forests. After fifteen years of implementation, however, these international carbon financing mechanisms have largely failed to reduce tropical deforestation (Rodríguez-de-Francisco et al. 2021), and much of the carbon benefit claimed has been inflated (West et al. 2020, 2023). Despite longstanding international concern and billions of dollars in investments, the extraction-based industries and commodities that drive regional deforestation continue apace (Mena et al. 2017; Pendrill et al. 2022).

Since 2007, REDD+ has taken an evolving range of forms, with activities occurring as part of voluntary and compliance carbon markets across both project and jurisdictional scales. Under jurisdictional REDD+, jurisdictions (national and subnational governments) implement policies and programs to reduce deforestation below agreed reference levels and can receive “results-based payments” for achieving emissions reductions (Green Climate Fund 2023). Thus far, however, REDD+ has largely been implemented at the project level for the voluntary carbon market (VCM) and funded by non-profits, development aid organizations, or climate investment funds. Project activities typically focus on the community or individual level and are based on incentivizing smallholders, local communities and Indigenous Peoples to reduce their deforesting activities (Skutsch and Turnhout 2020). As such, the burdens of implementing REDD+ tend to fall on marginalized communities, including Indigenous Peoples, and often on the most vulnerable within those communities (Satyal et al. 2020).

Harms from these projects include displacement and dispossession (Sarmiento-Barletti and Larson 2017), the undermining of local governance structures, and community conflict (Alusiola et al. 2021). Many REDD+ projects have provided minimal livelihood support (Sunderlin et al. 2017), yielding only temporary benefits for some community members (Duchelle et al. 2017; Kapos et al. 2022) while others lose out (Duchelle et al. 2018). In this way, REDD+ projects have been shown to replicate past harms against Indigenous Peoples, particularly around issues of territorial self-determination (Hein et al. 2020), while under-compensating them for lost access to forest resources. REDD+ has received widespread criticism from Indigenous organizations for its failures to support Indigenous self-determination and territorial defense (Cifuentes 2021).

Institutional support for Indigenous territorial defense and land rights are increasingly recognized as a key part of effective Amazonian forest protection (van Dam 2020). Indigenous land management and forest governance are responsible for some of the most effective protection against regional deforestation in the Amazon (Qin et al. 2023). Indigenous territories cover 45% of the Amazon’s intact forests while representing only 2.6% of Amazon carbon emissions (FAO and FILAC 2021). This is mainly because deforestation rates

in Indigenous territories are low—only half of what is seen even in national protected areas (FAO and FILAC 2021). Indigenous territories also store more carbon than surrounding areas, accounting for about 293 billion tons worldwide (Rights and Resources Initiative 2018), and host more than one-third of global biodiversity and climate change conservation priority areas (Dinerstein et al. 2020).

These relatively low deforestation rates are due in large part to Indigenous practices and initiatives that challenge extractive activities such as mining, logging, fossil fuel production, cattle ranching, and plantation agriculture (Kruid et al. 2021). Extractive activities are the leading drivers of Amazonian deforestation and degradation (Albert et al. 2023) and also threaten water security and forest livelihoods, as recently seen with the case of gold miners invading Yanomami lands in Brazil and Venezuela (Ramos 2023). Indigenous Peoples have fought back against extractive pressures in their territories in diverse ways, and many have lost their lives in such conflicts (Global Witness 2022). In 2020, against the backdrop of ongoing threats, the Coordinator of Indigenous Organizations of the Amazon Basin (COICA)—one of the most politically powerful Indigenous organizations in the Americas, which represents Indigenous Peoples from nine Amazonian countries—called on Amazonian states and the IUCN World Conservation Congress to place a temporary ban on industrial activities in primary forests and work with Indigenous leaders to protect 80% of the Amazon by 2025 (IUCN 2021). Although climate change mitigation initiatives have increasingly attempted to include Indigenous Peoples (Brugnach et al. 2017), these efforts have insufficiently prioritized Indigenous leadership, and Indigenous Peoples are rarely compensated equitably for their ongoing labor in forest protection. Given their historical and ongoing struggles against extraction, guidance from Indigenous Peoples must be central to any climate justice approach for mitigating deforestation in the Amazon.

Climate justice is an intersectional concept, field, and social movement that treats climate change as a social justice issue (Sultana 2022a). In the context of the Amazon, climate justice recognizes the important role of Indigenous Peoples who are best positioned to protect forests against the main drivers of deforestation while supporting their initiatives for territorial protection and self-determination. With this paper, we contribute to ongoing conversations on whether and how REDD+ can equitably reduce deforestation and forest degradation (e.g., Parotta et al. 2022; Angelsen et al. 2018; Milne et al. 2019; Bayrak and Marafa 2016). Though we do not advocate for the continued use of REDD+ as it is currently conceived, we recognize that it will likely stay around. As scholars and practitioners who deeply understand both the urgency of the climate and deforestation crises as well as the problems with current solutions to them, we find it imperative to present an alternative and to suggest ways to improve current policies like REDD+.

It is important to note that we are a group of non-Indigenous co-authors. We draw on our experiences and expertise researching and working with Indigenous Peoples in the Amazon and worldwide on issues of land, territorial defense, and climate change mitigation initiatives. This proposal is built on an analysis of several interlinked dimensions of climate justice with respect to REDD+ and Indigenous Peoples in the Amazon, developed through both literature review and our collective work and research with various Indigenous climate initiatives, Indigenous rights programs, and REDD+ program implementation on the ground in Latin America.

Although the twelve principles we outline below (see Fig. 1) depart from the REDD+ model in fundamental ways, our recommendations could apply to both the design of new

Principles for a Climate Justice Approach to Climate Change Mitigation in the Amazon



Fig. 1 Twelve principles for a climate justice approach to climate change mitigation in the Amazon

programs and a justice-oriented reimagining of REDD+. This list of principles is not exhaustive. Sections 2 and 3 of this paper propose transformative approaches to climate change mitigation projects that are based in territorial defense and Indigenous leadership, respectively, and are beyond the current purview of REDD+. Section 4 proposes principles to strengthen existing REDD+ policy and institutional frameworks. Section 5 discusses the financing necessary to enable these types of improvements. Section 6 then integrates the twelve principles while exploring two examples of Indigenous-led climate change mitigation in the Amazon.

2 Transformative justice through territorial defense

Indigenous Peoples remain among the most impacted by histories of dispossession and genocide and are also among the most affected by (and least responsible for) climate change (Whyte 2020). REDD+ unfolds on this uneven playing field that is exacerbated by ongoing violence against Indigenous Peoples, often through territorial invasions and environmental destruction (Ribot and Larson 2012). Territorial defense is a framework that centers territory as a site of struggle over culture, meaning, and livelihoods and, we argue, must play a central role in a more transformative climate justice approach. Transformative justice imagines systems that are not dependent on hierarchy, oppression, and the destruction of nature and

instead promote the diversity of peoples and cultures, healthy ecosystems, and Indigenous self-determination.

Each of the dimensions of justice that we analyze in this paper are influenced by broad contextual injustices—the past and present social, economic, and cultural contexts and power relations that enable ongoing forms of injustice (McDermott et al. 2013). Coloniality is a primary contextual injustice that marginalizes Indigenous Peoples and mediates the adverse impacts of both climate change and the policies that seek to address it (Sultana 2022b). Coloniality involves economic, cultural, epistemic, and ontological forms of subjugation and has imposed the separation of nature and culture, the commodification of nature, and the destruction of forests (Escobar 2010). In order to address these contextual injustices, proponents of climate justice advocate for a focus on liberatory forms of justice, such as restorative and transformative justice, which have not been adequately addressed with respect to REDD+ (McGregor et al. 2020). Guided by emancipatory social justice movements, transformative justice recognizes how the climate crisis intersects with underlying contextual injustices and inequalities and calls for broader social, political, and economic change (Newell et al. 2021).

We propose that by supporting Indigenous territorial defense initiatives, climate justice approaches could have transformative effects, addressing the root causes of climate change and boosting co-benefits in meaningful and integrative ways. Any project on Indigenous land should affirm and strengthen Indigenous territorial defense as an integral and encompassing struggle that includes self-determined visions of a good life, collective rights, and the renewal of Indigenous knowledges (IK), among other political goals (Cifuentes 2020, 2021). Ensuring the protection of Indigenous territories through Indigenous governance mechanisms has been key to delivering more effective climate mitigation programs and more equitable access to benefits (Dawson et al. 2021).

Supporting Indigenous territorial defense also works toward restorative justice, which focuses on restitution for past wrongdoing and the repair of harm done to land and people (Schlosberg and Collins 2014). In the context of climate change, restorative justice calls for the countries and entities who are most responsible for and have benefited the most from deforestation, the burning of fossil fuels, and unsustainable land uses to rectify the harm experienced by peoples and lands most impacted by climate change, often disproportionately in the Global South (Pali et al. 2022). Though our analysis finds some aspects of restorative and transformative justice to be incommensurate with the current formulation of REDD+, we still integrate principles inspired by these forms of justice into our proposal for forest protection and territorial defense. We suggest that a restorative and transformative approach to forest protection must have territorial defense at its foundation, holding forest risk industries accountable for driving large-scale deforestation, compensating Indigenous Peoples for their role in long-term forest protection, and protecting the Rights of Nature. These three principles represent fundamental shifts in the way that climate change mitigation programs like REDD+ are currently conceived and lay the groundwork for our subsequent recommendations.

2.1 Principle 1: target the main drivers of deforestation

A climate justice approach to REDD+ should aim to prevent the expansion of deforesting industries and support Indigenous Peoples in addressing external threats to their forests.

Most deforestation in the Amazon is driven by extractive industries, including commercial agricultural land uses, timber extraction, oil development, and mining (de Sy et al. 2018). These industries are often encouraged by state policies, subsidies, and partnerships that remove environmental protections and favor corporate expansion (Vale et al. 2021) while constantly threatening Indigenous lands. The governments of Amazon Basin countries must shift policies and subsidies away from fossil fuel development, extraction, and forest risk commodities and towards sustainable, regenerative economies and the support of Indigenous territorial protection and rights.

As currently implemented, REDD+ projects often target the activities of smallholders and Indigenous Peoples for deforestation reduction goals, further restricting their access to land and resources while undermining livelihoods and self-determination (Müller 2020). Indigenous Peoples are an easier target for deforestation reduction because their activities are smaller-scale and have less opportunity cost than the deforestation caused by large-scale, capital-intensive activities and commercial industries (Osborne et al. 2014). This focus means that REDD+ projects typically do not address the primary commodity drivers of deforestation and therefore have little hope of achieving the reductions in deforestation that are required to avert the climate crisis. Indeed, research finds that while some REDD+ initiatives have modestly reduced deforestation (Simonet et al. 2018), many benefits have not outlasted their projects (Demarchi et al. 2023; Kemigisha et al. 2023). Overall, these efforts have been largely ineffective at fighting climate change (West et al. 2023).

By contrast, under a model emphasizing territorial defense, emissions reductions are created by preventing extractivist development in Indigenous territories. Projects can implement territorial protections and monitoring activities that support Indigenous Peoples' ability to detect and respond to the threats to their land tenure and strengthen Indigenous self-determination overall.

2.2 Principle 2: account for Indigenous Peoples' long-term role in forest protection

A restorative climate justice approach recognizes the long history of Indigenous forest protection and provides proportionate compensation and even reparations for past dispossession and territorial loss. One of the core environmental integrity standards of REDD+ is *additionality*, the requirement that claimed carbon benefits are "additional" and would not have occurred in the absence of project funds and activities. A restorative climate justice approach takes a more expansive view of additionality, recognizing and compensating the labor of long-term forest protection (see Hatcher et al. 2021). Payments could be based on carbon stocks and sequestration, area protected, and the cost of the governance necessary to uphold Indigenous territorial protection. This may require alternative methodologies for carbon accounting that assess deforestation avoided through the defense of land from extractive industries and agricultural encroachment.

For many carbon projects, additionality is difficult to demonstrate, and conventional implementation can penalize Indigenous Peoples already engaged in sustainable forest practices because their deforestation rates might be low even in the absence of REDD+ programs (Mason and Plantinga 2013). This has sidelined and undervalued Indigenous projects (Skutsch et al. 2015; Wunder 2015), putting those who have historically conserved their forests at a disadvantage while favoring those with high records of deforestation who can make significant reductions (van Dam 2020). Under common methods for calculating

additionality, the entities most responsible for deforestation and climate change—including the state—gain the most from REDD+, an outcome that also reinforces the idea that governments and private sector actors are best equipped to manage forest resources. As Indigenous territories face mounting external threats, their protection must be a priority in forest conservation. With institutional backing for territorial defense programs and monitoring to protect against invasion, additionality could be achieved if the level of forest monitoring and protection would not be possible without the support of climate funding.

2.3 Principle 3: recognize and uphold the Rights of Nature

As one step toward achieving climate justice, we propose that states and other governing bodies should implement legal instruments to recognize and uphold the Rights of Nature (RoN). Legal instruments that recognize RoN by establishing the legal personhood of nature and/or its elements are now present on all continents and at local, provincial/state, national/federal, and even constitutional levels. In places where it is recognized, this framework has often served as an important tool for enabling the legal protection of Indigenous territories. Indigenous Peoples and others have successfully employed RoN to fight against extraction, upholding the rights and agency of nature and natural entities (McGregor et al. 2020) while promoting more just relations with more-than-human beings (Celermajer et al. 2020). Companies found in violation of RoN can incur fines and obligatory reparations for the damage inflicted on people and nature (Fuentes 2022).

One of the most well-known and legally robust acknowledgements of RoN is Ecuador's 2008 Constitution, which integrates RoN as a tool for sustainable development that is closely tied to the concept of *Buen Vivir* or Living Well (Kauffman and Martin 2017). Recently, local authorities in Ecuador's Los Cedros cloud forest successfully applied RoN to defend environmental and Indigenous rights while safeguarding the Los Cedros Reserve from mining concessions (Guayasamin et al. 2021). In 2018, the Kichwa People of Sarayaku of the Ecuadorian Amazon launched *Kawak Sacha*, or the Living Forest proposal, based on their cosmovision that recognizes the forest as alive and sacred with its own rights (Gualinga 2019; Santi and Santos 2019).

At its roots, our current climate change crisis is linked to a separation between humans and nature that has permeated Western capitalism since at least the scientific revolution, when nature was rendered into an object of scientific study, its rights and liveliness diminished in favor of modern Eurocentric worldviews (Merchant 1980). By contrast, many Indigenous cultures see nature and natural entities as kin who are imbued with personhood and have intrinsic rights that must be respected (Whyte 2020; Dev 2020). Here it is important to note that the concept of legal personhood does not fully reflect or encompass Indigenous knowledge and worldviews. Some observers have expressed concern that overstating the connection between RoN and Indigenous ontologies could constrain Indigenous emancipatory politics (Tănăsescu 2020). Still, if developed with the full participation of Indigenous Peoples, RoN has the potential to achieve greater environmental protections, and there is room to strengthen the framework further (Kauffman and Martin 2017) so that it may be legally employed to support territorial defense as a strategy for mitigating climate change and deforestation.

3 Indigenous-led climate initiatives

Climate policies and programs often exclude Indigenous epistemologies and self-determined visions of wellbeing in favor of the values and knowledge associated with those who control and dominate global climate finance and governance discussions (Cifuentes 2021; Nuñez 2018). This is a function of climate coloniality, which narrows the debate around climate change and the range of possible responses to those that reflect dominant discourses and worldviews, often from the Global North (Sultana 2022b). In response, Indigenous Peoples and their organizations are increasingly creating and implementing their own climate change initiatives across Amazonia at the communal, national, and pan-Amazonian scales (Cifuentes 2021, 2023). These initiatives tend to begin with the recognition that Indigenous Peoples have been central in keeping forests standing and also reflect critiques characterizing forest carbon offsets and REDD+ as a form of “carbon colonialism” (Bachram 2004) that can reinforce unequal North-South power relations and fuel land grabs and dispossession in tropical forests. We propose prioritizing such Indigenous-led initiatives, supporting their work toward recognition justice and Indigenous environmental justice (IEJ), as well as political goals like self-determination.

Recognition justice entails recognizing the experiences of Indigenous Peoples and other marginalized groups who face social, cultural, and political forms of discrimination (Newell et al. 2021). The state inclusion of environmental and climate justice leaders in initiatives like REDD+ is a common performance of recognition justice that can divert energy away from grassroots efforts and goals (Pellow 2018). IEJ emphasizes the colonial roots of ongoing exclusions and calls for an understanding of differences in worldviews and lifeways (Whyte 2017). It illuminates how colonialism simultaneously created environmental disruptions and cultural genocides (Gilio-Whitaker 2019). Colonial systems have furthermore imposed male/female dichotomies and gender hierarchies (Lugones 2010), which contribute to gender-based violence and discrimination that impact Indigenous Peoples. Because of these injustices, Indigenous women are impacted by climate change in gender-specific ways, as they are often in charge of agriculture and food production in places like the Amazon. A climate justice approach must thus engage with historical injustices including colonial genocides and epistemicides (Santos 2015), seeking to overcome the tendency of current climate policies to extend these injustices by excluding, ignoring, or co-opting Indigenous ways of knowing (Sultana 2022b). In other words, climate justice requires the strengthening of Indigenous-led initiatives, upholding of Indigenous knowledges and worldviews, and fostering of gender equity, which are the principles that this section highlights. Section 6 further explains Indigenous-led initiatives such as Amazon Indigenous REDD+ (RIA) and the Kawsay Ñampi (Way of Life) project in light of these and the other principles.

3.1 Principle 4: prioritize Indigenous leadership and self-determination

Beyond a mere inclusion of Indigenous individuals in REDD+ programs designed far from Indigenous territories, a climate justice approach must center Indigenous leadership in the creation and implementation of climate change initiatives. We propose accomplishing this by prioritizing Indigenous-led initiatives, as they are typically tied to goals including self-determination and territorial vitality and defense.

Self-determination, an anti-colonial paradigm that emphasizes collective rights over individual rights, is a cornerstone political goal for Indigenous movements worldwide (Burguete Cal y Mayor 2010). Its full implementation is contingent on recognizing Indigenous political and legal systems that include ancestral claims to lands and ways of governing, planning, and ordering territories according to Indigenous worldviews (Anaya and Williams 2001). In international law, the right to self-determination is set out in the International Covenant on Civil and Political Rights (ICCPR) and the International Covenant on Economic, Social and Cultural Rights (ICESCR); and the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) explicitly affirms Indigenous Peoples' right to self-determination. Self-determination stems from Indigenous understandings of well-being and Indigenous-determined futures (McGregor et al. 2020); as some Amazonian Indigenous organizations conceive of it, self-determination entails an ability to define their own future, direct and manage their socio-cultural lives, and control the pace and rhythm of change (Ortiz 2010). Several Indigenous climate initiatives now incorporate mechanisms to cultivate Indigenous communities' self-determination, such as support for their Life Plans, which are collectively developed instruments to "capture communities' visions of a good life through elements ranging from opposition to extractive industries and strengthening Indigenous cultures to promoting income-generating endeavors" (Cifuentes 2021: 136).

By contrast, REDD+ projects have been known to interfere with Indigenous self-determination, autonomy, and access to forest resources by setting restrictions on local resource use and land management (Poudel et al. 2014; Ingalls and Dwyer 2016). Scholars have also shown that REDD+ and other PES schemes, which rely on Western conceptualizations of property as primarily an economic relationship, do not adequately value or account for Indigenous Peoples' complex relationships with territories and other living beings (Cifuentes 2021). As a result, REDD+ programs have sometimes weakened Indigenous Peoples' right to distinctive spiritual relationships with their territories, as recognized by UNDRIP. Additionally, REDD+ programs can often reinforce logics that frame traditional land and resource uses as backward, inefficient, or environmentally destructive (Borras and Franco 2018), even when they have been shown to be relatively low-impact or to improve ecosystem vitality (Fox et al. 2009). These narratives can restrict Indigenous self-determination and reinforce government-led decision-making and land management (Phelps et al. 2010).

3.2 Principle 5: uphold Indigenous knowledges and worldviews

Critical to Indigenous-led climate initiatives and a climate justice approach is the recognition of the ways that Indigenous worldviews, knowledges, and practices have maintained forest-territorial vitality (Cifuentes 2021). Forests are recognized for social, cultural, economic, and spiritual values that cannot be represented in monetary terms alone. In many Indigenous ontologies throughout Amazonia, forests and natural beings are recognized as inspired and thus having personhood and associated rights (Dev 2020). This is evident in the Kichwa People of Sarayaku's *Kawsak Sacha* or Living Forest declaration (Gualinga 2019).

REDD+ has raised questions about whose ways of knowing and conceiving forests are prioritized (Schroeder and González 2019). Indigenous knowledges are critical for the long-term sustainable management of forests (Lansing 2011), and scholars have thus argued for integrating IK and biocultural approaches into climate and forest governance regimes

(Fogel 2004; Fernández-Llamazares et al. 2021). However, environmental policies often seek to integrate IK under frameworks defined by Western (or governmental) goals, ideas of nature, and explanations of environmental problems (Nadasdy 2003; Simpson 2004). Additionally, even with participatory mechanisms in place, REDD+ strategies often exclude IK from their design, implementation, and evaluation (Cifuentes 2017).

The economic valuation of nature inherent in REDD+ has sometimes clashed with Indigenous conceptions of nature in Amazonia and beyond (Shankland and Hasenclaver 2011). In REDD+'s market logic, the need to calculate carbon prioritizes Western scientific and technical knowledge over IK. Conflicts surrounding REDD+ and its implications for justice can thus be ontological in nature, hinging on tensions over what constitutes a forest or which subjects are entitled to benefits and rights (Schroeder and González 2019). For Indigenous Peoples, the latter can include both more-than-human beings and future generations (Sauls 2020). As a result, both the climate justice literature and Indigenous Peoples have argued for supporting Indigenous initiatives that attend to Indigenous knowledges and ontologies, including more-than-human agency and territorial vitality (Nuñez 2018; Cifuentes 2021).

3.3 Principle 6: foster Indigenous women's rights and leadership

Women and gender-diverse people hold specific kinds of knowledge, interact with their territories in specific ways, and experience differentiated impacts under climate change (A/HRC/51/28 2022). This principle centers women's leadership in climate action as well as the need for a gender-sensitive approach to climate justice more generally. Indigenous women and their rights and knowledges have often been excluded from REDD+. Scholars argue that the mechanism has treated forests as the arena of men despite the important role women have played in forest and agro-forest management (Löw 2020). Often relying on reductive assumptions about gender, REDD+ has also proven to perpetuate gendered divisions of labor and increase women's labor burdens (Westholm and Arora-Jonsson 2015). Though REDD+ includes gender-related safeguards, scholars note that these largely show up as bureaucratic obligations that take gender inequality as "a problem of planning rather than power" (Westholm and Arora-Jonsson 2015: 196). Attending to underlying gender-related power relations (Wong et al. 2019) must be central to climate justice.

Lastly, it is necessary to recognize and address the barriers that women face vis-a-vis gender roles and access to leadership within many Indigenous communities and organizations. Despite these barriers, Indigenous women have a history of leading struggles over territory, sovereignty, self-determination, and survival and have achieved many successes in demanding that governments respect their rights (Suzack 2015). In Amazonian countries like Ecuador, Indigenous women have led actions to pursue self-determination with gender parity, incorporating women's rights within Indigenous collective rights (Picq 2018). The perspectives of Indigenous women leaders must be centered at all scales of politics, and climate initiatives can contribute to the work of overcoming such gender-based barriers.

4 Safeguarding Indigenous Peoples' rights

A climate justice approach must embrace procedural justice, including full respect and implementation of existing international standards for the recognition and protection of Indigenous Peoples' rights. Procedural justice acknowledges Indigenous Peoples not just as stakeholders but rights holders due to their *sui generis* status under international law, which entitles them to a range of substantive and procedural rights. These include the right to self-determination, self-government, and participation in decision-making; consultation and free, prior, informed consent (FPIC); lands, territories and resources; prior environmental and social impact assessments; benefit sharing; and grievance redress mechanisms, as affirmed in UNDRIP and the International Labor Organization (ILO) Convention 169 as well as other international and regional instruments and jurisprudence. While few REDD+ host states have ratified ILO 169, most have endorsed UNDRIP and are party to several UN and regional human rights treaties. However, despite Indigenous Peoples' protected status under international law, the reproduction of Western institutional forms of power, structural racial discrimination, territorial dispossession, socio-economic marginalization, and a lack of effective legal recognition prevent them from fully enjoying these rights.

At the procedural level, safeguards are often put forth as the primary means of protecting the rights of Indigenous Peoples in the context of REDD+. Yet safeguards do not always reflect these rights as they align with international law or ensure their protection in practice (Dhedya Lonu 2022). While current safeguards require participatory engagement and compliance with certain national and international standards (Arhin 2014), they can differ across institutions and administrative levels and may not be sufficient (Sarmiento Barletti et al. 2021). For instance, under the United Nations Framework Convention on Climate Change (UNFCCC) bilateral and multilateral funding mechanisms and voluntary standards, safeguards differ on the inclusion of FPIC (Jodoin 2017) and the application of other rights under international law (Sarmiento Barletti et al. 2021); and the UNFCCC Cancún Safeguards include reference to UNDRIP but allow states to define their REDD+ safeguards. States—particularly those that have not ratified ILO 169 or do not have legal systems built on UNDRIP—may therefore exclude these rights in their own REDD+ safeguards (Sarmiento Barletti and Larson 2020; Dhedya Lonu 2022). When safeguards are in place, they can easily become box-ticking exercises that fail to prevent harms and fall far short of the transformative outcomes some hoped they might produce (Bee and Sijapati Basnett 2017; Wong et al. 2019; Alford-Jones et al. 2023), instead reflecting and reinforcing the historical socio-economic and political contexts in which they operate (Chomba et al. 2016; Ribot and Larson 2012; Sarmiento Barletti and Larson 2020).

Our vision for procedural justice includes safeguards that at minimum comply fully with UNDRIP. This covers the right to withhold consent to REDD+ projects as well as an effective, independent, and accessible grievance redress mechanism. However, there are key Indigenous rights that existing REDD+ safeguards are simply unable to guarantee. In the sections that follow, we elaborate the specific rights that are foundational to procedural justice, which climate justice-oriented REDD+ safeguards must uphold, including Indigenous participation in climate decision-making, strengthened land tenure and resource rights, and the promotion of co-capacity building.

4.1 Principle 7: ensure Indigenous participation in climate decision making

In compliance with Indigenous Peoples' right to self-determination, Indigenous Peoples must be recognized as rights holders and granted participatory political status to negotiate under international environmental conventions. At the domestic level, states should obtain their free, prior, and informed consent before adopting and implementing REDD+ programs. This includes adhering to Indigenous Peoples' own standards and protocols for FPIC.

One of the main barriers to Indigenous Peoples' full participation in climate policy decision-making is their current designation as "non-state observers" within the UNFCCC (Belfer et al. 2019). Indigenous Peoples are limited to submitting their position to the climate convention secretariat through the Facilitative Working Group of the Local Communities and Indigenous Peoples Platform or by lobbying international NGOs (Schroeder 2010). Despite calls to increase Indigenous voices in international negotiations (UN General Assembly 2016), Indigenous Peoples have had little support for their participation, limited opportunities to impact negotiations, and insufficient resources and capacity to engage (Schroeder 2010). At the United Nations, discussions on enhancing Indigenous Peoples' participatory status are ongoing. Proposals include accreditation of Indigenous Peoples at a level higher than NGOs (similar to observer status or National Human Rights Institutions) and the establishment of Indigenous-determined accreditation processes (A/HRC/49/69 2022).

State practices also create barriers to Indigenous Peoples' participation in decision-making processes. Under jurisdictional REDD+, states are expected to implement social and environmental safeguards and facilitate community rights to participation (Boyd et al. 2018) but often fail to do so. Reporting, transparency, and communication strategies are not typically inclusive of Indigenous Peoples' languages, making full understanding and effective participation an underachieved goal (Santos Rocha da Silva and Correia 2022). Indigenous Peoples are less likely to be included when politicians with influence over REDD+ funding allocation are closely linked to deforesting industries or when governments do not recognize claims of Indigeneity or self-determination and lean to more top-down coordination (Schroeder 2010). Access to decision-making power can also be blocked by political processes and technical requirements that limit Indigenous Peoples' involvement, particularly when land rights are not legally recognized, when there are competing land claims, or where they have a lack of institutional capacity.

At the domestic level, effective protection and implementation of the right to FPIC under international standards should be a prerequisite for the full and effective participation of Indigenous Peoples in designing environmental policy and projects. As defined by UN-REDD+ Programme guidelines, after which many REDD+ programs are modeled, FPIC "is the right of the peoples concerned to choose to engage, negotiate and decide to grant or withhold consent" (UN-REDD 2013). States and international institutions often apply a limited interpretation of the right to FPIC which does not conform to existing international human rights standards (A/HRC/39/62 2018). This can result in the failure to recognize Indigenous Peoples' right to say no to a project and may limit their effective participation in the consultation process due to a lack of culturally appropriate procedures or respect for Indigenous decision-making processes. Some Indigenous Peoples have adopted their own FPIC protocols that provide direction, certainty, and clarity for governments and private proponents who have an interest in developing any plan, project, or activity in Indigenous territory (IWGIA & Ford Foundation 2022). Climate mitigation programs should priori-

tize and comply with these protocols above and beyond the basic international REDD+ standards.

4.2 Principle 8: strengthen Indigenous Peoples' land tenure and resource rights

Indigenous Peoples' rights are directly related and deeply connected to their territory. Strengthening Indigenous rights to territory and resolving land tenure conflicts should be a primary goal of climate mitigation and forest protection initiatives at all scales. REDD+ can shift local power structures by weakening customary control of land, emphasizing private property rights, and replacing local institutions (Leach and Scoones 2015). When the right to FPIC is not respected, state decision-making often favors competing claims to forest resources at the expense of Indigenous self-determination.

Subsurface resource rights often remain the purview of the state, including mining and oil concessions that overlap with Indigenous territories. Current legal systems are also largely inadequate for addressing Indigenous Peoples' proprietary carbon rights (Streck 2020). As enrollment in REDD+ depends on access to carbon rights to generate an offset, when the state maintains primary rights to environmental services, Indigenous Peoples are less likely to benefit directly from carbon sequestered on their territories despite having the legal right to benefit from their lands. Overall, REDD+ implementation can place restrictions on Indigenous access to natural resources in their territories, and Indigenous Peoples' lack of legal standing and access to decision-making exacerbates these failings (Lyster 2011).

In theory, a REDD+ requirement for clear and secure land rights could serve as a tool to strengthen land tenure, protect customary rights, and secure rights to land (Larson et al. 2013). In practice, however, research has found that most REDD+ measures have resulted in little land tenure support (Sunderlin et al. 2018) because they lack specific protections for Indigenous land and resource rights (Lemaitre 2011). Without specific protections in place, states may erode Indigenous land rights by justifying uses, including REDD+, based on claims of national priority (Shankland and Hasenclever 2011). States may also use the lack of formal recognition of land rights as a justification for the violation of the right to FPIC (Mahanty and McDermott 2013).

Domestic legislation to secure Indigenous Peoples' land tenure must comply with existing international human rights standards, requiring states to recognize, title, and demarcate Indigenous Peoples' territory before implementing projects that may affect them (Article 26.3 UNDRIP; Awas Tingni-IACtHR 2001). Furthermore, carbon rights should be tied to Indigenous land and territorial rights, allowing Indigenous Peoples to benefit from resources in their territories.

4.3 Principle 9: promote co-capacity building and Indigenous technical expertise

A climate justice approach must address asymmetries of power and remove obstacles that prevent Indigenous Peoples from exercising their right to self-determination and full participation in REDD+. At this time, many Indigenous Peoples do not have the capacity to meet REDD+ technical requirements and therefore cannot independently develop projects without extensive technical support (Pokorny and Pacheco 2014). As a result, government agencies, NGOs, and private firms become the primary gatekeepers of REDD+ projects, and Indigenous Peoples participate only marginally in the resulting technocratic processes.

Rather than blaming these outcomes on Indigenous Peoples' lack of technical capacity, they should be viewed as failures of the system to incorporate Indigenous worldviews, political processes, knowledges, and goals—and as an invitation to design more inclusive enrollment processes that would enable Indigenous Peoples to capture more benefits and retain greater control over decisions regarding their land.

Under current REDD+ project frameworks, Indigenous languages, knowledges, and political procedures are ignored or subordinated as a matter of course. Language capacity can be a barrier to full participation for communities with low rates of literacy and spoken proficiency in the dominant language, which can in turn create systemic inequalities in resource distribution, including technological resources (computers, cameras, drones, etc.) and labor, proposal development, project implementation, and so on. Furthermore, international legal requirements for carbon accounting and compliance monitoring, reporting, and verification (MRV) demand significant bureaucratic negotiation and technical expertise (Gupta et al. 2012) to draft elaborate project design documents, MRV reports, and detailed financial statements, typically in English. Enrolling in REDD+ programs involves dealing with international NGOs, carbon brokers, investors, government officials, local communities, and associated power relationships (Bolin and Tassa 2012). In this context, communities often depend on external connections to access capital, labor, technologies, markets, and expertise to benefit from REDD+ programs (Stickler et al. 2018), a process that can be complicated by exclusionary language politics and proceedings (Kymlicka 1997).

Increasing technical capacity can enable and promote full Indigenous participation in the design, implementation, monitoring, and reporting of projects that affect their territories. Procedures should be revised to accommodate Indigenous Peoples' worldviews and promote technical self-sufficiency. The goal should be to foster an environment of interculturality and co-capacity building, where Indigenous Peoples gain skills in navigating bureaucratic and technical processes while outside collaborators, project developers, and consultants are trained in Indigenous-led and collaborative design and management processes that prioritize Indigenous needs (Colfer et al. 2022). Studies have found that participatory processes such as mapping and land-use planning can equip communities with the tools and knowledge to ensure their effective participation in project negotiations (Bourgoin et al. 2013). Engaging communities in carbon inventories, territory mapping, and reporting can build technical capacity and help legitimize claims to carbon credits (Knowles et al. 2010). Ultimately, these processes are important to both environmental and justice-minded goals; when Indigenous Peoples have significant engagement, both conservation outcomes and socio-economic outcomes are improved (Chhatre and Agrawal 2009; Dawson et al. 2021).

5 Equitable climate finance and benefit sharing

Justified in part as a way of realizing distributive justice—the equitable distribution of benefits, costs, rights, and responsibilities (Rawls 1971)—REDD+ is promoted as a mechanism to achieve global climate goals by transferring climate finance from the Global North to the Global South (Okereke and Dooley 2010). And indeed, industrialized nations and their corporations drive the growing market for forest carbon offsets purchased from the Global South. Nevertheless, climate finance remains grossly inadequate, and markets often fail to

produce genuine climate benefits or effectively reach Indigenous communities (Osborne 2015).

Attempts to implement distributive justice through REDD+ have instead often favored nations with the greatest climate debt—the debt that industrialized nations hold for their disproportionate contributions to climate change (Warlenius 2018). Thus, countries that have benefited most from burning fossil fuels tend to dictate how those with much smaller carbon footprints and historical climate debt manage their lands in exchange for relatively small sums of money (McAfee 2016). National governments in the Global South often receive insufficient compensation from carbon markets considering their debts and development needs, which are unable to compete with profits from deforesting industries like largescale logging, agriculture, and mining. Climate funding that does reach the Global South may not be incorporated into governmental general budgets, and thereby remains unable to catalyze broader systemic changes to extraction-based economies.

Inequities in the political economic system shape how climate payments are allocated among governments, hired experts, and the Indigenous Peoples responsible for forest protection. In some cases, REDD+ has exacerbated such inequities within tropical forest nations. The conditions attached to international climate funding often ensure that power stays with international and corporate actors, including state agencies, financial/multilateral institutions, and project developers (Gifford 2020). A major portion of international climate mitigation financing is thus appropriated by actors in the Global North, leaving those protecting forests locally with fewer resources (Loft et al. 2017). Due to eligibility requirements, Indigenous Peoples who should be able to access benefits are often either inadequately compensated for their forest protection efforts or excluded from REDD+ altogether (Poudyal et al. 2020).

During COP 27 in Sharm El-Sheikh in 2022, a “loss and damage” fund was created to support the countries least responsible for and most affected by climate change; it was officially established at COP 28 in Dubai in 2023, where it secured pledges exceeding \$500 million (Wyns 2023). Although the establishment of the loss and damage fund is a pivotal move, it currently fails to meaningfully hold corporate and governmental agents responsible for deforestation and pollution and fails to channel adequate funding to Indigenous Peoples engaged in forest protection. To address these inequities, significantly larger sums of public and private financing are needed as well as markets or alternative mechanisms that impose higher carbon prices, deliver more substantive co-benefits, and route climate finance directly to Indigenous Peoples.

5.1 Principle 10: fill the climate finance gap through blended finance

Greater international funding is needed to support Amazonian countries’ efforts to reduce deforestation and compensate them for the lost opportunity costs of extraction. This should be channeled through blended finance (Morita and Matsumoto 2023). In 2021, the global climate finance transferred to the Global South was \$89.6 billion (OECD 2023). Although this figure has been increasing annually, it remains significantly less than the amount required to achieve science-based targets and the Paris Agreement goals of keeping global temperature rise below 1.5 degrees Celsius; to avoid severe climate impacts, investments of at least \$4.3 trillion are needed annually by 2030 (Naran et al. 2022).

The most substantial funding streams for REDD+ come from public sector finance, which includes multilateral and bilateral funds, aid, and agreements (Granziera et al. 2022). Yet most public sector funds made available to Global South countries are in the form of loans rather than grants (Bos and Thwaites 2021). These loans often result in significant debt burdens, enforcing development models and standards set by the creditors, perpetuating coloniality, and favoring climate-intensive practices. Considering the substantial climate debt of industrialized countries and the disproportionate impacts that fall on the Global South, these mechanisms are not equitable.

We offer three key recommendations to more equitably integrate blended finance. First, bilateral and multilateral funding should be increased based on the pledges made and disbursed as grants, not as loans. Second, the application of debt-for-nature swaps should be explored, allowing international banks to forgive a portion of a country's debt in return for investments in conservation initiatives, as in Ecuador's recent \$1.1 billion agreement to protect the Galapagos (Nedopil et al. 2023). Along with debt-for-nature swaps, debt-for-climate agreements, which forgive the debt of Global South nations in exchange for the implementation of climate change mitigation and adaptation measures (Thomas and Theokritoff 2021), can assist governments in making decisions that support a just ecological transition. Finally, additional funding could be obtained from carbon taxes or fees applied economy-wide in industrialized countries. If structured correctly, carbon fees can avoid placing financial burdens on the Global North's vulnerable populations by ensuring tax revenues are recycled back into the economy, with dividends particularly directed to low-income communities in a "fee and dividend model" (Ummel et al. 2016).

5.2 Principle 11: embed carbon markets and develop non-market mechanisms

Enhancing the efficacy of forest carbon markets and developing robust non-market financial mechanisms are critical for realizing comprehensive climate goals. REDD+ promises climate mitigation, livelihood improvements, and biodiversity conservation, aiming to incentivize participation beyond carbon motivations (Visseren-Hamakers et al. 2012; Astuti and McGregor 2015). However, it has struggled to achieve this "triple win" due to disembedded market mechanisms that overlook the social and ecological values of forests and a shortage of non-market alternatives (Polanyi 2001; Asiyambi and Lund 2020; Osborne and Shapiro-Garza 2018). Offsets operating in the voluntary market should support entities committed to carbon neutrality and decarbonization in line with science-based targets, particularly for addressing scope 3 emissions—value chain emissions that entities find difficult to reduce independently—and should be seen as a transitional strategy. By supporting projects, programs, and initiatives that adhere to climate justice principles, the groundwork can be laid for a sustainable and regenerative economic model that benefits forest ecosystems and the communities who have long stewarded them.

In a more embedded market model, higher carbon prices are essential and should at least match the opportunity costs of current commodity land uses such as cattle, timber, palm oil, and soy. Aiming to accurately reflect the social and environmental harm of each additional ton of carbon (Anthoff et al. 2009), scholars have identified the Social Cost of Carbon (SCC) to be around \$100 to \$200/tCO₂ (Stern and Stiglitz 2021; Rennert et al. 2022), compared with the average carbon price of around \$11/tCO₂ (in 2023) for forestry and land use projects (Forest Trends' Ecosystem Marketplace 2023). An equity-weighted SCC, which con-

siders the disparate impacts on under-resourced communities, may increase the SCC by two or three times (Anthoff and Emmerling 2019). Carbon prices at this equity-weighted SCC level would provide fair compensation to nations and communities for forest protection efforts, enable projects with true social and ecological co-benefits, and address the opportunity costs associated with lucrative deforestation drivers. Through these measures, carbon markets could evolve to strengthen and secure Indigenous land tenure, support land back efforts, implement climate debt solutions, and transition extractive industries toward the regenerative models crucial for climate change mitigation. While non-market mechanisms should be employed at the highest level, when markets are used, they must be embedded, reflecting broader social and ecological values of ecosystems (Polanyi 2001; Osborne and Shapiro-Garza 2018).

Alternatively, climate contributions are an important non-offset and non-market mechanism for achieving a restorative justice approach to climate mitigation. The climate contribution model supports the channeling of climate finance into mitigation projects without allowing contributors to claim these carbon reductions towards their individual neutrality goals. Although carbon accounting may still occur and methodologies similar to those used for offsets could be applied, the primary distinction lies in the non-transactional nature of the contributions, which do not offset the funder's emissions. The establishment of criteria and procedures for such contributions is actively debated, with proposals from civil society and government entities aiming to ensure that they are informed by a profound understanding of regional drivers of climate change (Haya et al. 2023). These discussions are integral to ongoing negotiations under Articles 6.4 and 6.8 of the UNFCCC, focusing on non-market mechanisms as a means to fulfill the ambitions of the Paris Agreement (Haya et al. 2023; Anderson 2022).

5.3 Principle 12: direct finance to Indigenous Peoples

Financial benefits must be shared equitably along the payment chain, with fair portions going to Indigenous Peoples for their historical management of forests and in recognition of colonial histories and land dispossession. While there is growing awareness of the importance of climate action by local communities and Indigenous Peoples, they receive less than 1% of climate finance from Official Development Assistance worldwide (Hatcher et al. 2021). The structure of REDD+ makes it difficult for Indigenous Peoples to access a fair share of funding due to inequalities along the chain of technical experts, project developers, and government agencies who often receive the lion's share of offset revenues. It can be particularly difficult for these communities to access REDD+ finance via jurisdictional REDD+, where funding flows through state and national governments that have historically oppressed Indigenous Peoples and have comparatively weak track records for protecting forests (Hein et al. 2020).

Indigenous Peoples who attempt to secure carbon funding to join or implement a REDD+ project may risk sacrificing their livelihoods or losing important ecosystem services. Indigenous Peoples are often particularly vulnerable in these situations, as REDD+ can constrain traditional land uses without providing sufficient socio-economic benefits to justify these losses (Furtado 2017). The most disadvantaged communities, and the most disadvantaged households within those communities, are thereby often either excluded from accessing REDD+ benefits or impacted most negatively by the program's land-use restrictions, some-

times simultaneously (Chomba et al. 2016; Bayrak and Marafa 2016). REDD+'s incentive structure can also favor private sector speculation, which can take advantage of states' weak legal frameworks on Indigenous land rights and collective carbon rights. Unruly private actors colloquially referred to as "Carbon Cowboys" have entered into unfair or even fraudulent deals with Indigenous Peoples to create REDD+ projects, undermining international standards and established negotiation mechanisms at the expense of Indigenous communities (Aguilar-Støen 2017).

Direct payments should go to Indigenous Peoples in amounts that at minimum sufficiently compensate for both program burdens and labor. A more equitable approach would include a share of the financing sufficient to support their climate initiatives and Life Plans, ensuring that participation in the program does not sacrifice self-determined development goals (see Sect. 3). Although international donors must also fairly compensate Amazonian governments, they should be cautious not to support governments that continue to actively undermine the rights of Indigenous Peoples in the hopes that increased compensation will shift their calculus.

6 Integrating the principles

To integrate the twelve principles mentioned above, we advocate for supporting Indigenous-led territorial defense initiatives while also working toward an equitable and inclusive international legal and governance framework. Examples of Indigenous-led initiatives that follow aspects of a restorative and transformative climate justice approach include *REDD+ Indígena Amazonico* (RIA) and the Kawsay Ñampi conservation project led by the People of Sarayaku in the Ecuadorian Amazon.

The Coordinator of Indigenous Organizations of the Amazon Basin (COICA), together with its Peruvian member, AIDSESP¹, developed RIA in 2011 as a REDD+ alternative that would represent an Indigenous vision for climate action (Consejo Directivo de AIDSESP 2016, Unkuch 2014). RIA intends to draw from Indigenous knowledges and development preferences while titling territories and valuing forests as systems that integrate humans and nature (Unkuch 2014). As such, RIA is founded on Indigenous ontologies in which territories are lifeworlds that encompass multiple relationships among humans and more-than-human beings (Cifuentes 2021; Principle 5). For COICA leaders, these relationships are what have kept forests standing in the long-term (Principle 2). Because RIA emerges from territorial defense, COICA leaders aim for it to support interrelated struggles such as those for territorial security and collective rights, and those against extractivism (Cifuentes 2021; Principles 1 and 8).

Furthermore, RIA seeks to promote the self-determination of Indigenous communities across Amazonia, for instance by supporting their Life Plans (Principle 4, Principle 8), which often draw from Indigenous philosophies like the Andean *Buen Vivir* or *Sumak Kawsay* (Living Well) or the Amazonian *Vida Plena* (Full Life) (Principle 5). These philosophies provide an alternative perspective for wellbeing that emphasizes living collectively in more-than-human communities that can include animals, plants, spirits, and other entities (Chuji et al. 2019). They can be further applied to questions of human-environment relations, the

¹ Interethnic Association for the Development of the Peruvian Rainforest (in Spanish: *Asociación Interétnica de Desarrollo de la Selva Peruana*, AIDSESP).

role of the economy, the source of value and meaning, and practicing reciprocity with nature (McAfee 2016; Zimmerer 2012). While there are critiques of *Buen Vivir*, particularly in its co-optation by extractivist governments (Radcliffe 2012), Indigenous scholars and activists have reclaimed these philosophies as important to climate initiatives (McGregor et al. 2020). RIA-based projects in places like the Amarakaeri Communal Reserve in Peru have supported Life Plans when promoting Brazil nut commercialization, or strengthening Indigenous women's knowledges about ancestral crops (Cifuentes 2021; Principles 5, 6 and 8). While RIA does not make explicit reference to climate finance, COICA is also part of the Global Alliance of Territorial Communities—with members in the Americas, Indonesia and Central Africa—which has created *Shandia*, a common platform that aims to establish direct regional and national funding mechanisms and capacity-building (Global Alliance 2024; Principles 9, 11 and 12).

Another Indigenous-led initiative that follows aspects of a restorative and transformative climate justice approach is the project Kawsay Ñampi (Way of Life): Conservation and Preservation in the Ecuadorian Amazon. Kawsay Ñampi is a model of Indigenous-led climate change mitigation in tropical forests based in territorial defense against extractive industries and invasion (Dev et al. 2023). Led by the Kichwa People of Sarayaku and co-developed with support from the University of California, this project not only reduces emissions associated with external commodity drivers such as oil development and logging (Principle 1), it also protects biodiversity and Sarayaku's territory and way of life, which is central to passing Indigenous knowledge to the next generation.

This is accomplished through the implementation of extensive territorial monitoring plans that would not be possible without climate financing (Dev et al. 2023). This means that the project's activities meet existing standards for additionality and go beyond, recognizing the People of Sarayaku's long-term role in forest protection, though it only compensates for forest protection as of the start of project implementation (Principle 2). Project activities are carried out by a territorial monitoring team comprised of members appointed by Sarayaku's Governing Council, who have undergone extensive training and capacity building to systematically monitor, collect data, write reports, operate drones and camera traps, track biodiversity, and administer all on-site project activities (Principle 9).

The Kawsay Ñampi project integrates a holistic vision of ecological responsibility and Indigenous self-determination, asserting the People of Sarayaku's territorial rights (Principle 8) and reinforcing and recognizing their long-term and self-defined goals for development (Principle 12). By foregrounding territorial defense and rejecting deforestation drivers like oil development and other forms of extraction in their territory, the project affirms the People of Sarayaku's role in forest conservation and counters the extractive narrative that often undermines Indigenous land-use efficacy. In addition, the project is founded in Sarayaku's cosmovision and knowledges (Principle 5), particularly with regard to *Kawsak Sacha* (Gualinga 2019), a proposal that recognizes their territory as a living forest that must be free from extraction (Principle 2). This harmonizes with Ecuador's legal framework for Rights of Nature that acknowledges the living forest's inherent rights (Principle 3), thereby codifying a less anthropocentric model of climate change mitigation.

As the People of Sarayaku are primary leaders of the project (Principle 4) with the ultimate say in decisions (Principle 7) in all project phases, the project's governance structure advances procedural justice. This approach transcends the mere fulfillment of Free, Prior, and Informed Consent (FPIC) standards, fostering self-determination and ensuring that

Indigenous voices and governance structures guide the initiative. The project also bolsters gender equity (Principle 6) by incorporating the entire territory, including agricultural areas which are the domain of women, into the project scope, and by including women in key roles in project leadership and the territorial monitoring team (Dev et al. 2023).

Furthermore, the Kawsay Ñampi project resists commodifying carbon through market transactions by investing in a climate justice contribution model (Dev et al. 2023). Underpinned by Articles 6.4 and 6.8 of the UNFCCC, the contribution model avoids traditional carbon credits in favor of non-market investments dedicated to funding Sarayaku's Life Plan. This structure addresses climate finance inequities (Principle 10), employs a non-market contribution model that reflects the full value of the forest (Principle 11), and ensures finance is directed to Indigenous Peoples (Principle 12), recognizing the Sarayaku's historical forest stewardship and correcting imbalances perpetuated by previous financing models.

The Kawsay Ñampi project and RIA both demonstrate the ways in which our 12 principles can be integrated to form a cohesive framework aligned with a climate justice approach, where Indigenous Peoples are not merely included as participants but hold leadership or co-leadership roles, which is crucial to the realization of effective climate action. These initiatives demonstrate how these principles, when applied with respect to Indigenous self-determination and territorial defense, can move mitigation projects toward just, effective climate solutions.

7 Conclusion

The urgency of the climate crisis demands immediate, effective action, and the importance of forests in this regard is clear. However, as we have shown, the existing forms of REDD+ have been ineffective at addressing the main commodity drivers of deforestation and remain controversial among Indigenous Peoples, who disproportionately bear the burdens of these initiatives. Though REDD+ was designed as a market-based strategy for promoting distributive justice, our analysis shows that in the case of Indigenous Peoples, justice has rarely been achieved. REDD+ projects have often compromised self-determination and sidelined Indigenous political systems in decision-making over their territories, leaving Indigenous Peoples with limited power to shape climate policy, design mitigation programs, and participate in and benefit from their implementation. However, Indigenous Peoples are key actors in protecting forests and stand at the frontlines of climate justice endeavors around the world. They must therefore be key partners in climate change mitigation in tropical forests, and supporting their secure land tenure, self-determination, and territorial defense must be a top priority for climate action. As outlined above, our twelve climate justice principles operate across scales, from project implementation to national and state policy and international finance mechanisms, and, if adopted broadly, could work toward addressing the injustices of the systems that have perpetuated climate change and inequalities alike.

Since the mid-2000s, scholars and policymakers have debated whether or not REDD+ is worth saving. While in theory REDD+ holds promise for addressing climate change, deforestation, and its associated environmental impacts, as discussed throughout this article, the challenges and criticisms facing REDD+ must give us pause. In our view, the answer to whether REDD+ in either project or jurisdictional form is worth saving will depend heavily on the extent to which REDD+ is capable of addressing not only technical carbon account-

ing and environmental integrity concerns but also its social justice dimensions, particularly as they relate to Indigenous Peoples.

In addition to contributing to a climate justice approach for climate mitigation programs involving Indigenous Peoples in Amazonia, adopting these twelve principles may also help address the equity issues facing other Indigenous Peoples and local communities impacted by REDD+, including Afro-descendant communities. This climate justice approach responds to both the technical issues and social justice dimensions of climate action while tackling some of the root and structural causes of climate change in tropical forests. Ultimately, a climate justice approach must lead not only to more effective and equitable outcomes but to deep transformations of the broader political economic systems at the heart of the climate crisis.

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