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Rethinking Global Climate Politics:  
Integral Territorial Ontologies, Ancestral Knowledges, and the Defense of Life  
in Amazonian Indigenous Climate Initiatives

A dissertation submitted in partial satisfaction of the  
requirements for the degree Doctor of Philosophy  
in Global Studies

by

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September 2021

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## ABSTRACT

Rethinking Global Climate Politics: Integral Territorial Ontologies, Ancestral Knowledges, and the Defense of Life in Amazonian Indigenous Climate Initiatives

By Sylvia Rocío Cifuentes

Amazonia is fundamental for climate change action: it stores an important amount of the planet's carbon emissions, while also emitting carbon due to deforestation. With higher proportions of primary forest cover, and lower rates of deforestation, Indigenous territories are crucial for climate change mitigation. Yet, the extractive development models of Amazonian countries are threatening the lives and lifeways of Indigenous peoples.

This dissertation demonstrates how climate change has become a politically significant object for Amazonian Indigenous organizations. Analyses of Indigenous-led transnational—and plurinational—climate strategies are scarce in the literature. I illustrate how Indigenous climate initiatives in Amazonia incorporate ontological and territorial politics, ancestral knowledges (AK) and the agency of more-than-human beings beyond local scales to global climate politics. To do so, I draw from critical and digital geography, science and technology studies, decolonial and Indigenous studies. My methodology integrates a political ecology of scale approach—i.e., four scales of Indigenous political organization—and Indigenous methods—e.g., open-ended interviews and sharing circles. Fourteen months of fieldwork further involved volunteering with the Coordinator of Indigenous Organization of the Amazon Basin (COICA) and the OPIAC School of Political Training in Colombia.

I argue that Amazonian Indigenous climate initiatives are founded on what I call *integral territorial ontologies*—or conceptions of territories as indivisible entities or



lifeworlds that encompass multiple relationships not only between humans and other living beings, but also among more-than-human beings.

This dissertation is organized into three articles. In Article I, I analyze COICA's Amazon Indigenous Initiative to Reduce Emissions from Deforestation (RIA) and argue that RIA is founded on integral territorial ontologies and incorporates more-than-human agency. As such, RIA is tied to territorial defense and challenges understandings of forest/territorial vitality and ordering, as well as the processes of that facilitate the commodification of nature. Article II examines how, through boundary-work—i.e., drawing boundaries around AK—, Indigenous leaders and climate initiatives simultaneously reinforce and move beyond binaries like traditional/modern, local/global, while also scaling-up territorial knowledges. RIA and the OPIAC School take AK beyond the local scale to global climate politics, while also upholding their inextricable link to territories as lifeworlds. In Article III, I argue that forest monitoring programs and technologies co-produce forms of climate and territorial politics in Amazonia. Indigenous organizations imagine and enact territorial defense and autonomy—e.g., incorporating the agency of more-than-human beings in digital tools for territorial planning. But the programs also reinforce a politics of open-access information, strict territorial boundaries, and exclusive rights—that can threaten Indigenous autonomy.

In conclusion, this dissertation calls into question what global environmental politics are, and who participates in them. I demonstrate how the central role of Indigenous peoples in global climate politics becomes essential to their purposes of defending Amazonian territories and life itself. Given the urgent and multidimensional threats of climate change, this research begins to shed light on how strategies that emerge from historically marginalized peoples and their lifeways can expand our horizon of imaginable solutions.

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# 1. Introduction

In the past decade, climate change events have become protagonists in the media. Among them, the devastating fires that consumed vast areas of Amazonia, California, and Australia captured the attention of people from all over the world. Scientific reports also increasingly link the emergence of pandemics, like the COVID-19 pandemic and beyond, to global environmental changes including deforestation and ecosystem loss (e.g., Toleffson, 2020). These global phenomena are impacting human and nonhuman life at ever increasing rates (e.g., Jafry, 2018; IPCC, 2019). But they do not impact everyone equally: Indigenous peoples and their territories are among the most affected, including in the Arctic or Amazonia (e.g., Pinedo-Vasquez et al., 2012; Wilson, 2014; Norton-Smith et al., 2016; Nuñez, 2018). But Indigenous peoples are not only vulnerable people and passive victims of environmental changes.

Instead, Indigenous peoples are actively participating in global climate politics and creating their own initiatives to mitigate and respond to climate change. This dissertation focuses on the climate change strategies of Amazonian Indigenous organizations at different political scales, questioning how they re-shape global climate politics. In addition to the current and future impacts of climate change in Amazonia, there are many aspects that place the region at the center of climate change debates. As the largest rainforest in the world, the Amazon Basin stores an important amount of the planet's carbon stocks, while also accounting for around 27% of all emissions attributed to deforestation (Hecht, 2011). Land use and land-use change, mostly due to deforestation, further produces around 23% of total anthropogenic global greenhouse gas emissions (IPCC, 2019). With higher proportions of

primary forest cover and carbon storage, and lower rates of deforestation, Indigenous territories—about a third of Amazonian lands—are gaining notoriety in that context (Nepstad et al, 2006; Lu et al, 2010; Ricketts et al, 2010; Blackman & Veit, 2018; RAISG, 2020).

Yet, Indigenous peoples and territories also face growing threats from the extractive development models of the nine countries that share the Amazon Basin—which also involve activities that drive of deforestation. At least half of Indigenous territories are under pressure from activities such as mining, oil extraction, infrastructure, agricultural activity, or hydroelectric development, with a third of them being under “high” and “very high” pressure (RAISG, 2020).<sup>1</sup> These activities often generate conflicts that derive in the criminalization, incarceration and even murder of Indigenous people in Amazonia (e.g., COICA, 2018; Front Line Defenders, 2020; Alianza por los Derechos Humanos, 2021). Although the exact figures for Amazonia are unknown, of all human rights defenders killed in 2020 globally, sixty nine percent of were working on land, Indigenous peoples’, and environmental rights; and at least seventy seven percent were from Amazon Basin countries: Brazil, Colombia, Peru, and Bolivia (Frontline Defenders, 2020). These challenges and threats add up to Indigenous peoples’ historical and ongoing demands for collective and territorial rights.

In that context, my research demonstrates how climate change has become a politically significant object for Amazonian Indigenous organizations. That is, climate change strategies are providing venues for the organizations to integrate territorial politics at different political scales, including the global. Indigenous leaders created the organizations

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<sup>1</sup> This analysis excludes pressures from timber concessions, coca and oil palm cultivation, and illegal activities. So, the impacts of extractive activities on Indigenous territories are much higher.

analyzed here two to four decades ago, to coordinate and strengthen their actions for territorial defense, their survival as peoples, and other interrelated objectives. Currently, because Indigenous leaders look for support to confront the threats of extractivism, and to defend their territories and their own lives, the emerging international interest to address climate change has become an opportunity to obtain it—although this is not without challenges and contradictions, as this research shows.<sup>2</sup>

My central argument in this dissertation is that Amazonian Indigenous climate initiatives are founded on what I call *integral territorial ontologies*—or conceptions of territories as indivisible entities or lifeworlds that encompass multiple relationships not only between humans and other living beings, but also among more-than-human beings. These relationships are central in Indigenous climate change mitigation initiatives, as they are essential in creating and maintaining territorial vitality—and so, in keeping forests standing in the thousands of Indigenous communities and territories across Amazonia. Territories are also the spaces that ensure Indigenous physical and cultural survival. Thus, climate change action becomes inseparable from other aspects of territorial defense, including the renewal of Indigenous knowledges or the struggles against extractivism.

Furthermore, I illustrate how Indigenous climate initiatives incorporate ontological politics, ancestral knowledges (AK) and the agency of more-than-human beings beyond the local to national and global scales of political organization. As such, I begin to shed light into whether and how we can conceive of global climate politics as “otherwise”—that is, as a

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<sup>2</sup> The term extractivism relates to the activities that remove large volumes of non-processed natural resources, particularly for export. This can include minerals, petroleum, and agricultural, forest, fishing, touristic activities, among others (Acosta, 2017).

politics that moves beyond Western political frameworks and builds on “practices of cultural, ecological, and economic difference for concrete projects of world transformation” (Escobar, 2007b, p. 198).<sup>3</sup>

In what follows, I give details about the Amazonian Indigenous organizations at different political scales that were part of this study, as well as their political purposes and climate change initiatives. In doing so, I also clarify concepts including ancestral knowledges and ontological politics. Lastly, I explain the contributions to the literature that this dissertation offers and present the main findings of each of its three articles.

## **Amazonian Indigenous Organizations and their Historical and Contemporary**

### **Objectives**

Current “anthropogenic climate change is an intensification of environmental change imposed on Indigenous peoples by colonialism,” as Potawatomi scholar-activist Kyle Whyte reminds us (2017: 153). Indigenous scholars recognize that colonialism—through capitalism and industrialization—induced changes that transformed the ecological conditions that supported Indigenous peoples’ lives and livelihoods. Thus, the threats, vulnerability, and displacement that climate change causes are only intensified forms of the challenging

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<sup>3</sup> Decolonial scholars define politics and knowledges “otherwise” as those that are articulated as alternatives to both neoliberal and Marxist understandings of democracy, anticolonialism, modernity, capitalism, ontology, or epistemology. Otherwise is “to start from values that are outside modern Western frameworks, while not hesitating to relocate selective features of the older frameworks within the new ones. It is to create a world in which other worlds exist” (Harding, 2016, p. 1,078, drawing from Escobar, 2007b).

conditions that Indigenous peoples have had to face—and have resisted and survived to—for centuries (Cameron, 2012; Whyte, 2017).

The same is true in Amazonia: this dissertation demonstrates that the histories of Indigenous resistance in the region cannot be separated from climate change action. As such, the organizations at the center of this study combine efforts to defend Indigenous territories, lifeways, and knowledges with climate change action.

First, the Coordinator of Indigenous Organizations of the Amazon Basin (COICA), founded 1984, is, according to its leaders, the largest grassroots organization in the world—or “organización de base” (in Spanish), because its mandate and political structure originates in over five thousand communities across Amazonia. COICA represents organizations from the nine Amazon Basin countries: Colombia, Ecuador, Peru, Bolivia, Brazil, Venezuela, Guyana, Suriname, and French Guiana. Each of these organizations, in turn, represent several sub-national organizations and over five hundred Indigenous peoples. Among such peoples are those of COICA leaders: Curripaco, Shuar, Tacana, Asháninka, Manchineri, Inga, Patamona, among others. I use the term “peoples” throughout this dissertation, as most Indigenous leaders across Amazonia prefer this term when referring to their ethnic group, identity, and/or sense of belonging. There are other preferred terms such as “nationalities,” but they are not used as widely in the region.<sup>4</sup> Therefore, in representing a plurality of

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<sup>4</sup> The terms in Spanish and Portuguese are “pueblos” and “povos,” respectively. Terms such as “tribes” can be considered inappropriate. “Peoples” can also encompass non-Indigenous groups like Black collectivities. “Nationalities” is, for instance, preferred among Ecuadorian organizations, to highlight that Indigenous groups comprise different nations and citizenship.



peoples—or nations—COICA is a plurinational organization, in addition to being a Pan-Amazonian and transnational organization.

For COICA, its history did not begin in 1984, as history “is integral, because the life of the peoples is directly linked with other beings that inhabit Amazonian forests... it is a way of relating with the world” (COICA, n.d.). Instead, COICA’s current actions are linked to how Indigenous peoples in Amazonia,

“Resisted to the violence of the processes of European colonization and the constitution of republics [i.e., nation-states] ... with the help of [their] spirits, the wisdom of [their] ancestors and the direction of [their] leaders... [and how they continue to] contest “the invasion of Amazonia and the... threats to [their] lives and spirituality, the loss of [their] territories... [and] the indiscriminate pillaging of [their] resources and wisdoms (COICA, n.d.).

Therefore, for COICA and its members across the Amazon Basin, any climate change response, including those against extractivism or mitigation strategies, respond to longstanding political goals and territorial defense. COICA’s actions are oriented towards “promoting, protecting, and securing Indigenous peoples and territories, through the defense of their lifeways and social, spiritual and cultural principles and values... in the framework of (an Indigenous) pre-existence, for the defense of life and Amazonia...” (COICA, n.d.). In addition, climate change action is part of COICA’s strategic priorities for Amazonia, that its Directive Council (CDC)—i.e., one leader/coordinator from each country—defines every four years.

Consequently, COICA’s “Macapá Mandate,” which focuses on the exercise of Indigenous rights “to stop the climate crisis” (COICA, 2018: 1) illustrates how a concern with climate action relates to broader political purposes. Created in the most recent

Amazonian Summit that took place in the city of Macapá in 2018—and defined COICA’s CDC—this document gives a framework for the actions of COICA and its member organizations. The Mandate refers to an “Indigenous climate ambition to fulfill the Paris Agreement,” and encourages the creation of Indigenous climate platforms in the nine Amazon countries, including:

“The holistic management and a ‘Full Life’ economy in 240 million hectares of Amazonian forests that are part of Indigenous territories; the titling of over 100 million hectares of Indigenous territories, the [implementation of] Amazon Indigenous REDD+ [i.e., Amazon Indigenous Initiative to Reduce Emissions from Deforestation] ... with gender and intergenerational equity... an Indigenous forest monitoring and vigilance..., and... adaptation plans with a central role of Indigenous women” (COICA, 2018: 3).<sup>5</sup>

The Mandate also highlights that to implement such goals—and others to confront extractivism and developmentalism—COICA member organizations must organize a collective, integrated, and articulated strategy. This to create “international strength to overcome the racist national barriers” while incorporating the approaches of “ancestral and integral territoriality” that are common to Amazonian peoples (COICA, 2018: 4).

In that regard, Indigenous leaders employ the concept of ancestral to refer to those knowledges, epistemologies, and practices which emerge from the historical relationships of Indigenous peoples and territories. Ancestral knowledges (AK) are passed from generation to generation and are part of different areas of life including medicine, nourishment, and forest vitality. Those historical and continuous relationships are what validate AK and make them equally (if not more) valid when dealing with the environment or climatic changes. Thus, that

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<sup>5</sup> 240 million hectares are almost 600 million acres, and 100 million hectares are almost 250 million acres.

collective strategy involves, as the articles in this dissertation show, not only centering the historical claims to Amazonian territories, but also the ancestral relationships with the territories and the more-than-human beings that inhabit them, as well as the multiple ancestral knowledges and practices of Indigenous communities. This while also recognizing the violent colonial histories which have made Indigenous peoples and their knowledges invisible.

Second, at the national scale, Indigenous organizations, as members of COICA, also follow the ideals of the Macapá mandate: their leaders were the ones who wrote them, who met to elect COICA's CDC leaders, and who make part of COICA's Coordinating Council (CCC). Therefore, that connection between longstanding political goals and climate change action is similar for organizations across Amazonia. Among them, those that have created or implement the climate initiatives that I analyze here include:

- The Organization of Indigenous Peoples of the Colombian Amazon (OPIAC), created in 1995 and constituted by the fifty-six Indigenous peoples that inhabit the Colombian Amazon and their respective organizations (OPIAC, 2021). OPIAC's objectives include "to defend... and protect the territories and peoples of the Colombian Amazon ... to promote... each of the peoples' life plans... to protect [their] knowledges... traditional practices, uses, and customs... to strengthen and advise organizations, authorities and communities... [and] to safeguard Indigenous rights" (OPIAC, 2018). For OPIAC, and the other Amazonian Indigenous organizations that I describe here, Life Plans capture communities' visions of a good life, through elements ranging from opposition to

extractive industries and strengthening Indigenous cultures to promoting income-generating endeavors.

- The Interethnic Association for the Development of the Peruvian Rainforest (AIDSESEP), founded in 1980 to represent the sixty-four Indigenous peoples of the Peruvian Amazon and their nine regional organizations—which represent 109 federations and 1809 Indigenous communities. AIDSESEP works to promote the defense and respect of the peoples’ “collective rights... [their] alternative development proposals, according to their cosmovision and lifeways” while vindicating “the territorial integrity of Amazonian Indigenous peoples” (AIDSESEP, 2021).
- The Confederation of Indigenous Nationalities of the Ecuadorian Amazon (CONFENIAE), created in 1980 to represent eleven Indigenous nationalities and their fifteen hundred communities. CONFENIAE works for the nationalities’ self-determination and quality of life, by “strengthening their organizations, promoting community development..., [and] re-valorizing their own cultures” while defending Amazonian territories and “the rights of Amazonian peoples as they confront the extractivist model promoted by the state” (CONFENIAE, n.d.).
- The office the Amarakaeri Communal Reserve in Peru (ECA Amarakaeri) created in 2002, is a technical organization. As such, it is perhaps the most dissimilar among these organizations—even though it still makes part of the Amazonian organizational structure, mainly through its community leaders. ECA Amarakaeri co-manages the Amarakaeri Communal Reserve, representing its ten communities, together with the Peruvian National Protected Areas Service (SERNANP). This organization emphasizes on strengthening communities’ life plans and improving their quality of life, by guaranteeing

healthy ecosystems and fundamental rights, while also safeguarding the living cultures of the Harakbut, Yine and Matsigenka peoples in the Reserve (Quillahuamán, 2017).<sup>6</sup>

Because of these political objectives, for Amazonian Indigenous organizations, climate change politics—as part of territorial defense—is a contemporary struggle that weaves in ancestral ways of life as well. Thus, going beyond understandings of Indigenous resistance only as a reaction to unjust actions such as oil extraction—or, more broadly, to systems of power—this dissertation shows how the more comprehensive goal of territorial defense now also integrates the proposals, programs, and initiatives to address climate change that Amazonian Indigenous organizations create. I describe these initiatives below.

### **Indigenous Climate Initiatives as Simultaneously Global and Place-based**

The nature of climate change as a multidimensional phenomenon that affects diverse peoples and ecosystems has made it imperative to search for responses that have a transnational or global reach (e.g., Jasanoff & Martello, 2004). In that regard, scholarship about global environmental and climate politics has focused on the responses of states and transnational governance (c.f., Dauvergne, 2012). Political ecologists have further described global climate governance as an international regime—comprised of institutions, organizations, principles, decision-making procedures, and interstate treaties—that promotes a “market-based green governance” (Peet et al., 2011, p. 7). That is, through mechanisms like Reducing Emissions from Deforestation and Forest Degradation (REDD+), this regime

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<sup>6</sup> ECA Amarakaeri’s stated purposes are perhaps less confrontational because of its collaborative work with the Peruvian state.

enables nature commodification, standardization, and simplification, as well as the pursuit of economic interests in the name of sustainability (Fogel, 2004; Peet et al., 2011; Osborne, 2015).

But the scholarly literature has paid scant attention to Indigenous transnational organization and self-determined climate change strategies. This silence can demonstrate a (colonial) assumption that Indigeneity is restricted to the local, while intergovernmental politics and institutions represent the global. Critical perspectives in political ecology and science and technology studies (STS) often see “the local”—usually including Indigenous peoples, knowledges, and paradigms—as well situated to be part of alternatives, or reforms, to the various shortcomings of global climate governance (e.g., Jasanoff & Martello, 2004; McAfee, 2016; Schroeder & Gonzalez, 2019).

But the climate initiatives at the center of this study demonstrate that, while being place-based, Indigenous politics and climate change action are not restricted to local scenarios. These initiatives include:

- The Amazon Indigenous Initiative to Reduce Emissions from Deforestation (RIA), COICA’s main climate mitigation strategy. COICA (and AIDSESEP) began conceptualizing it in 2012 as an alternative to REDD+ that would represent a “Holistic Governance of Territories for a Full Life,” and an Indigenous vision for climate action that could resonate with communities and organizations across Amazonia. RIA intends to support communities’ life plans while drawing from ancestral knowledges and incorporating principles such as respecting Indigenous development preferences, titling and consolidating Indigenous collective territories, and “valuing forests as human-nature

integrating systems” (Unkuch, 2014, p. 20). While RIA is based on the relationships that already exist in the territories and ensure their vitality, the only place that formally executes RIA is the Amarakaeri Communal Reserve (and thus ECA Amarakaeri).

- The OPIAC’s School of Political Training (OPIAC School), created to “support Indigenous Peoples of the Colombian Amazon in their defense of life, autonomy, and territories, by training their own leaders integrally” (OPIAC, n.d.). The OPIAC school works to promote and recover knowledge systems that are “proprios” to Amazonia (OPIAC, n.d.)—i.e., that are characteristic or unique of its peoples. The school’s activities began in 2016 through a project funded by the Norwegian Agency for Development Cooperation’s (NORAD) Climate and Forests Initiative. Thus, its existence is also tied to a global concern with climate change, which values AK for keeping deforestation low. As such, its Territory and Biodiversity Program integrates several interconnected modules about climate change and territorial defense, seeking to provide training to young leaders in the AK that maintain territorial vitality, while also fostering a sense of belonging to the students’ own peoples.
- Forest monitoring programs, including COICA’s Early Alert and Rapid Response System (SAT for its acronym in Spanish), and AIDSESP’s Geoserver, which Indigenous organizations create in coordination with international environmental non-profit organizations (IENGOS) to mitigate climate change through addressing deforestation. Their premise is that using digital technologies, community members will monitor their territories to document and report threats such as invasions, illegal mining, illicit plantations and logging, corruption acts, among others. Technical professionals will then identify what kind of response—legal, communicational, internal, etc.—is viable and

appropriate. COICA seeks to build SAT as a system that gathers information about threats to Indigenous territories across Amazonia. AIDSESEP's Geoserver—that COICA plans to draw from for SAT—incorporates an Early Alert System and a registry of territorial claims and titling projects—which involves digital mapping and GIS.

Therefore, both COICA and RIA are inherently transnational or global political spaces, as they represent forms of politics that go beyond the borders of nations and regions. OPIAC and its School of Political Training, as well as AIDSESEP and its Geoserver, are also plurinational endeavors. Further, the creation of these initiatives responds to, in part, the global concern with climate change. That is, to an interest of the international community in climate change, and in Indigenous peoples' role in keeping forests standing in Indigenous lands. The organizations and initiatives that I analyze here also represent forms of global politics and globality—i.e., a social condition characterized by extremely tight global economic, political, cultural, and environmental interconnections across national... boundaries (Steger, 2018: 6). But I find that these are forms of global climate “alter-politics,” as they emerge from other ways of being and involve “other kinds of living beings” (c.f., Kohn, 2013: 14).

Thus, as mentioned above, in analyzing these political spaces and practices, I take the concept of ontological politics beyond local scales. Ontological politics illuminate how political practices and ethno-territorial struggles can constitute strategies for the defense of life and relational ontologies, in which more-than-human beings actively participate (Blaser,



2014; De la Cadena, 2015; Escobar, 2015).<sup>7</sup> Here, I put forward the concept of *integral territorial ontologies*, to shed light into how, for instance, the territorial relationships among humans and more-than-human beings are essential in keeping forests standing in Indigenous territories across Amazonia, according to RIA and the OPIAC School. Moreover, the proponents of these initiatives conceive of territorial/forest AK as one more element of the territories, and so of integral territorial ontologies and territorial defense. At the same time, ancestral knowledges are at the basis of political strategies for territorial defense.

Thus, in being inseparable from the territories, these relationships, knowledges, and politics have a “crucial place-based dimension” (as in Escobar, 2007a: 286) as well. Likewise, this dissertation illustrates how Amazonian Indigenous climate initiatives “scale-up” AK and the agency of more-than-human beings in climate strategies at different political scales. Scaling-up is possible when the proponents of these initiatives find commonalities across the knowledges of various Indigenous peoples and select those that are relevant for Indigenous physical and cultural survival—as well as for climate change. For instance, in RIA and the OPIAC School, Indigenous leaders and technical professionals incorporate place-based AK about agricultural practices, or about cycles to cultivate or fish. As such, AK are articulated in regional (or Amazonia-wide) and national scales of Indigenous political organization. Furthermore, some Indigenous leaders and organizations seek to scale-up these ancestral territorial knowledges and practices, and to make them more visible to non-Indigenous actors, by integrating them in forest monitoring programs and in tools such as digital mapping (see Article III).

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<sup>7</sup> I.e., those which skew the division between humans and nature (e.g., Escobar, 2015).

However, there are also many challenges and limitations to scaling up ancestral knowledges and practices, and to integrating territories as lifeworlds in climate initiatives. Pan-Amazonian initiatives like RIA can miss details, references to specific knowledges, or information about the different roles of knowledge holders such as elders, wise persons, or cultivators. The leaders who directly participate in designing the initiatives may also privilege their own cultural knowledges, or the ideas of their own peoples about what a “Full Life”—i.e., a good life or wellbeing—means. Additionally, many actors are seeking to collaborate with Indigenous peoples in their efforts to “keeping forests standing,” and to support the implementation of their climate initiatives. But whereas IENGOs present avenues and funding for Indigenous organizations to pursue this climate change action—and particularly for creating initiatives at Pan-Amazonian and national scales—they also often impose certain worldviews and limit the possibilities of some of these initiatives. For instance, the integration of certain places—such as the sacred, or agricultural—in digital maps, or the close monitoring of the activities of community members with digital tools, can even put some Indigenous communities at risk and limit their autonomy (Article III).

Still, these cases demonstrate that while being place-based, Indigenous politics and knowledges are not strictly tied to the local, or even national scales of action. Thus, Indigenous leaders, as transnational political actors, propose self-determined climate initiatives and create their own forms of global climate politics—beyond the extremely limited participation that the formal spaces of climate negotiations and mainstream climate change mechanisms can offer (e.g., Cifuentes, 2017; Schroeder, 2010).

## **Contributions to the Scholarly Literature**

Few (if any) studies have paid attention to Indigenous self-determined climate change initiatives, and how they articulate Indigenous knowledges and ontologies. Indigenous scholars have argued that an environmental (and climate) justice that has epistemological and ontological foundations can offer a renewed vision for a sustainable and just world, by giving importance to the “mutually respectful and beneficial relationships”, not only among human beings but also with “all of creation” (Whyte, 2017; McGregor, 2018: 7). However, much of the literature about Indigenous peoples and climate change focuses on the local scale or does not engage with specific cases and initiatives on the ground (e.g., Whyte, 2017; McGregor, 2018). Furthermore, critical perspectives about Indigenous politics and climate change have had a geographical focus on North America (e.g., Whyte, 2017; Estes, 2019; Giglio-Whitaker, 2019).

Conversely, as mentioned above, analyses of global environmental politics still largely focus on international negotiations, treaties, and mechanisms (e.g., Dauvergne, 2012), where Indigenous peoples only have a secondary role (c.f., Schroeder, 2010; Reed, 2011; Shankland & Hasenclever, 2011). Moreover, scholars and activists are increasingly interested on how Indigenous peoples, knowledges, and perspectives can inform science and climate change policies (e.g., Schroeder, 2010; Reed, 2011; Shankland & Hasenclever, 2011; Schroeder & Gonzalez, 2019). Yet, Indigenous, and allied scholars have also argued that merely including some aspects of Indigenous knowledges in science and policies that are designed far from Indigenous territories may undermine Indigenous self-determination, decision-making, and resource use (Nadasdy, 2003; Simpson, 2004). The initiatives that I analyze here present a counterpoint to that.

Furthermore, political ecology literature on neoliberal climate governance has rarely been in conversation with critical geography about Latin America and Amazonia—which has centered struggles over the resources and meanings of the territories, as well as ontological politics (c.f., Hecht and Cockburn, 2010; Baletti, 2012; Blaser, 2014; De la Cadena, 2015; Escobar, 2015; Lopez-Sandoval et al, 2017; Vela-Almeida et al, 2020). I engage with these strands of literature to analyze Indigenous organizations and initiatives as global climate politics “otherwise.” This also to examine their possibilities for overcoming the unjust aspects, and limitations, of mainstream global climate governance. The latter aspect further allows this research to go beyond predominant analyses Indigenous politics in Latin America, that emphasize local resistance to extractive development, national policies, or neoliberal globalization.

This dissertation also places the scholarship about territorial and ontological politics, as well as decolonial perspectives, in conversation with several strands of STS and digital geographies to analyze Amazonian climate initiatives—a type of analysis that is rare in the literature. For instance, Postcolonial STS and decolonial perspectives have highlighted how colonial projects created an epistemological divide and power relations between “universal science and local knowledge,” and created binaries such as local/global or traditional/modern, which are persistent in climate politics (e.g., Jasanoff and Martello, 2004; Escobar, 2007a; Santos et al, 2007; Bowker, 2008; Lyons et al, 2015; Foster, 2016; Subramaniam et al., 2017). Article II analyzes how Indigenous leaders and organizations contest such colonial differences while sometimes also reinforcing those binaries—in order to advance their political purposes within climate politics.

Lastly, in analyzing how the self-determined climate and territorial politics of Indigenous organizations integrate forest monitoring programs and technologies, I expand scholarship in STS and digital geographies. This in relation to how technologies and environmental relations and politics can shape one another in monitoring programs and digital spaces (Gabrys, 2016; Bakker and Ritts, 2017; McLean, 2020). But additionally, to the historically exploitative relationships that technoscientific projects have enforced towards Indigenous peoples, and to the potential and shortcomings of digital tools for emancipatory goals (e.g., Hunt & Stevenson, 2017).

### **Research Articles in this Dissertation**

Article I, “Rethinking climate governance: Amazonian Indigenous Climate Politics and Integral Territorial Ontologies,” analyzes RIA as an Indigenous-led transnational and interethnic climate strategy. Here, I draw from scholarship in ontological and territorial politics to put forward the concept of integral territorial ontologies. I argue that by incorporating these ontologies and more-than-human agency, RIA effectively introduces a form of radical alterity to global climate politics. As such, RIA is tied to territorial defense and challenges understandings of forest/territorial vitality and ordering; as well as the processes which facilitate the commodification of nature. This article concludes with a reflection about the possibilities of decolonizing what we understand as the global politics and practices to respond to climate change.

Article II, “Scaling-up Territorial Knowledges: Boundary-making in Amazonian Climate Politics” demonstrates how and why Indigenous actors involved climate change initiatives engage in “boundary-work” or draw boundaries around Indigenous or ancestral

knowledges. I argue that through boundary-work, RIA and the OPIAC School are simultaneously reinforcing and moving beyond binaries like traditional/modern, local/global, while also scaling-up territorial knowledges. For instance, RIA and the OPIAC School take AK beyond the local scale while also upholding the inextricable link between AK and Indigenous territories as lifeworlds. I conclude by discussing how these initiatives can expand our understandings of the links among knowledge, power, and climate politics.

Article III, “Co-producing Autonomy? Forest Monitoring Programs, Territorial Ontologies, and Indigenous Politics in Amazonia,” analyzes COICA’s SAT and AIDSESP’s Geoserver, in the framework of collaborative programs that use digital technologies to control and stop deforestation events. I argue that forest monitoring programs and technologies co-produce forms of climate and territorial politics in Amazonia. Through forest monitoring programs, Indigenous organizations imagine and enact territorial defense, or a politics founded on integral territorial ontologies. This because the programs are part of how Indigenous organizations and their leaders imagine their autonomy, and provide new tools for territorial planning, zoning, and defense. However, these programs can also reinforce a politics (of IENGOs) where territories are spaces with strict boundaries and exclusive rights, and which encourages open-access information—thus potentially threatening Indigenous autonomy. Thus, I inquire into both possibilities and the challenges that these programs represent for Indigenous politics and climate change action in Amazonia.

Together, these articles center concerns for self-determination, cultural survival, and forest/territorial vitality in analyzing Indigenous climate politics and initiatives in Amazonia. In doing so, they unsettle the very meanings of concepts including (climate) justice, global politics, and Indigenous politics in the context of climate change.

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## 2. Methodology

This is a multi-sited and qualitative research project about Amazonian Indigenous climate politics, that involves various primary and secondary data sources. My methodology applies two approaches that have not been integrated before: a political ecology of scale perspective—that sees scale as socially, politically, and biogeographically defined (Neumann, 2009)—and Indigenous methodologies—to incorporate a decolonizing lens and center Indigenous voices and epistemologies (Kovach, 2010). I chose this methodology because the literature about global environmental governance recognizes the diverse conceptions of scale in contemporary initiatives (Bulkeley, 2005) but has yet to elaborate on Indigeneity. Conversely, work about Indigenous methodologies tends to analyze a single scale or ethnic group (e.g., Kovach 2010; De la Cadena, 2015) rather than multi-scaled and interethnic or plurinational politics.

I seek to respond to several interrelated questions: How do Indigenous Amazonian climate initiatives at different scales integrate (or draw from) territorial ontologies and politics? How do Indigenous leaders articulate ancestral knowledges in climate politics? What are the kinds of politics that forest monitoring programs and technologies co-produce? How do the different conceptions of well-being—good living or a full life—of diverse Indigenous peoples in Amazonia inform climate initiatives at different scales?

In consequence, I analyze four scales which directly respond to the organization of Amazonian Indigenous politics (Figure 1). In most countries of the Amazon basin (and in broad terms), political representatives or leaders are selected starting at the community level.

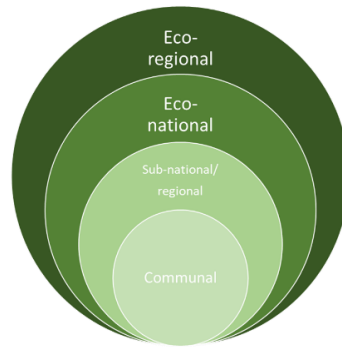
Such communal leaders then select leaders for a sub-national organization, that is, organizations at the state or provincial level, and/or organizations that belong to a specific peoples or nation, depending on the country.<sup>8</sup> Leaders from sub-national organizations subsequently choose national and then regional (COICA) leaders. In the case of the latter, for instance, the representatives of national organizations meet in a congress that takes place every four years, to select one leader from each Amazon Basin country, to make part of COICA's Directive Council. Each of these leaders is, in turn, in charge of coordinating areas such as Climate Change, Territory and Biodiversity, Human Rights, Women and Family, among others. Thus, I incorporate scale as an Indigenous political practice—which also gives legitimacy to the representatives and organizations—rather than to reify static or hierarchical categories.<sup>9</sup> Quoting Gregorio Díaz Mirabal, COICA's General Coordinator:

“To be a COICA leader [it is necessary] to have been a leader in your community, of your local organization, of your regional (sub-national) organization after that, then your national organization... some leaders want to ‘jump’ from the local to the international, [or] some regional or national leaders lack spaces of representativity... It is important that this is respected at COICA. Not anyone can be [a COICA leader] because they must have an experience of struggle from the territory to the international, and this is not a process of one or two years, it is a process of minimum ten years.” (Personal communication, April 2019).

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<sup>8</sup> Leaders is the most direct translation for the word “dirigentes” that is most used in Spanish. Similar words are used in other languages. For instance, in Portuguese, the term is lideranças.

<sup>9</sup> Which scholars including Marston et al, 2005 view critically.



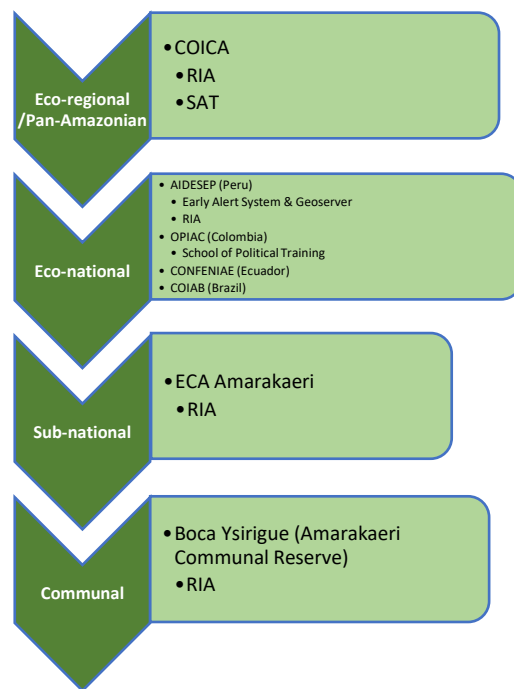
**Figure 1:** Scales of Indigenous Political Organization in Amazonia

Therefore, in this research, the eco-regional, or Pan-Amazonian, is represented in COICA and its climate initiatives: the Amazon Indigenous Initiative to Reduce Emissions from Deforestation (RIA) and the Early Alert and Rapid Response System (SAT), as they aim to bring together Indigenous organizations—from the nine Amazonian countries and five hundred Indigenous peoples—and propose coordinated actions for territorial defense, and now also climate change mitigation (Figure 2).

The eco-national is represented in the national Amazonian organizations that are also COICA members, including the Interethnic Association for the Development of the Peruvian Rainforest (AIDESEP), the Organization of Indigenous Peoples of the Colombian Amazon (OPIAC), the Confederation of Indigenous Nationalities of the Ecuadorian Amazon (CONFENIAE), and the Coordination of Indigenous Organizations of the Brazilian Amazon (COIAB), among others. Moreover, the initiatives that I analyzed at this scale were the OPIAC School of Political Training, specifically its Territory and Biodiversity Program—as this is the Amazonian Indigenous initiative that most clearly takes Indigenous knowledges beyond the local scale and integrates them into (national) climate politics—and AIDESEP’s

Early Alert System or Geoserver—because this is the only national-level forest monitoring program with an information system in place and partially operating.

At the sub-national scale, I carried out research with ECA Amarakaeri as it is the only entity that is formally executing RIA—together with the reserve’s communities. Thus, at the communal level, I selected the Amarakaeri community of Boca Ysirigue since, according to ECA’s leaders, it stands out for its successful implementation of RIA—involving the commercialization of Brazilian nuts in the framework of its life plan—and its previous participation in climate change projects (e.g., to recover ancestral crops).



**Figure 2:** Organizations and climate initiatives at different scales.

My methods include open-ended interviews and sharing circles, as these give space to story and narrative by being conversational and having an open-ended structure (Kovach,

2010; Smith, 2013). Furthermore, scholarship about Indigenous methodologies suggest adapting the specific methods to the traditions and protocols of the Indigenous peoples that will participate in the research (Kovach, 2010). However, the literature on Indigenous methodologies has yet to engage with Amazonian perspectives, as well as with plurinational organizations, spaces, and politics. Moreover, because this research encompasses organizations that bring together leaders from many different peoples, it is not possible to adapt the methods to one single peoples or epistemology.

To address those challenges, I incorporate methods such as participant observation in spaces where Indigenous leaders meet, discuss, and make decisions. This includes assemblies, demonstrations, meetings of COICA's Directive and Women's Councils; *knowledge mingas*—i.e., similar to workshops but more collaborative; *guayusadas*—planning spaces that occur at dawn and incorporate the herb guayusa—among others. The OPIAC School has similarly identified that Amazonian Indigenous peoples construct knowledges in collective spaces of dialogue such as yage (ayahuasca) ceremonies, work mingas (spaces of collective work for activities like agriculture or construction) or in conversations with elders or authorities—also called “oralidad” (OPIAC, 2019).

Therefore, fourteen months of fieldwork involved around 45 open-ended and semi-structured interviews, participant observation, sharing circles and a review of secondary sources (including reports, declarations, press releases, life plans and educational materials). Interview participants included Indigenous leaders/coordinators and technical professionals (men, women, and youth), and mestizo technical professionals, from organizations at the four scales. Leaders were the elected members of COICA's Directive or Women's Council, or of their respective organization. Technical professionals had been involved in the design and/or

implementation of climate change and forest monitoring programs. A snowball technique allowed me to identify further participants (e.g., COICA leaders identified individuals in other organizations who were involved in RIA). Interviews took place in Spanish, English, Portuguese, or French, as leaders are fluent in one (or more) of these languages—depending on their country of origin and other training—and I am fluent or have a conversational level in these languages. Interviews inquired about Indigenous climate initiatives, politics, and knowledges in Amazonia; participant’s conceptions of forests and territories, their understandings of development or a “good life,” how these aspects interconnect with monitoring technologies, among other questions. Sharing circles (three)—that are like focus groups but more adequate to foster narrative and storytelling (Kovach, 2010)—focused on similar topics as the interviews and took place in Boca Ysirigue.

Additionally, I carried out a round of preliminary research that involved (twenty) semi-structured interviews with Indigenous leaders, academics, and NGO, United Nations and government officials who had been involved in the design and implementation of REDD+ in the Ecuadorian Amazon or had collaborated with COICA in designing and promoting RIA (also with a snowball technique). This round informed my research design, and some of this dissertation’s conceptual discussions and findings.

I carried out participant observation while volunteering with COICA in its central office in Quito; in political meetings of CONFENIAE and COIAB; in the offices of ECA Amaraeri and in Boca Ysirigue. While volunteering with COICA, I collaborated in the design and reporting of the organization’s climate change initiatives and forest monitoring programs (those that I analyze here and others), I participated in meetings with NGOs and other donors that fund or co-implement these programs, I participated of planning meetings



(where leaders analyzed aspects such as how to integrate territorial defense in climate change or biodiversity initiatives), I carried out Spanish-English interpretation in the meetings of COICA's Directive and Coordinating Council—and thus heard discourses around topics related to territorial and climate politics and their importance for COICA first hand—I translated documents such as declarations from Spanish to English (and sometimes supported or edited translations to French or Portuguese), I supported the organization of events—another space for discourse analysis, mainly in what respects to non-Indigenous audiences—, among many other tasks.

I also volunteered with the OPIAC School of Political Training, supporting its communication strategy, and facilitating the module on REDD+ and RIA (according to the school's guidelines). The purpose of the volunteering component was thus to apply a decolonizing approach to transformative research. This means to support the organizations' goals of territorial defense by giving back in ways that are useful to them (as in Denzin et al, 2008; Kovach, 2010; Smith 2013).<sup>10</sup> Consequently, the findings of this research have informed project proposals and RIA concept notes that I co-produced with COICA leaders, and documentation that I prepared while working for COICA's Women's Council during the first semester of 2020. Lastly, I addressed research gaps and complemented my findings with a review of printed materials and webinars in 2020 and 2021 (remotely).

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<sup>10</sup> I have a background working with environmental NGOs and UN agencies—including in REDD+ projects—so the skills that I acquired in those spaces were potentially useful for COICA in its design, implementation and reporting of forest and climate change projects. Although, my knowledge of Spanish and English was one of the skills that COICA leaders found most useful for their purposes and limited resources—and to facilitate communication among leaders of different parts of Amazonia.

## Summary of research methods

<b>Location</b>	<b>Participants</b>	<b>Methods</b>	<b>Period</b>
Quito, Ecuador	Indigenous leaders, NGO, UN, and government officials associated with REDD+ and RIA.	Semi-structured interviews (20) and secondary sources collection.	Fall 2017
Quito, Ecuador	COICA leaders and technical team.	Open-ended interviews (20), participant observation and volunteering, secondary sources collection	Summer 2018 and Winter 2019
Puyo, Ecuador; Brasilia, Brazil and Cundinamarca, Colombia	CONFENIAE, COIAB and OPIAC leaders and technical teams.	Volunteering, participant observation, informal interviews, secondary sources collection.	Spring 2019
Lima and Amaraeri, Peru	AIDSESEP leaders and technical professionals. Sub-national (ECA Amaraeri) and community leaders and women (Boca Ysirigue).	Open-ended interviews (5), sharing circles (3), participant observation, secondary sources collection.	Fall 2019
Remote	Leaders and technical team from the different organizations described above.	Secondary sources collection.	Summer 2020, Winter & Spring 2021

## Data analysis

The data sources that I examined include interview transcriptions, field notes from my participant observation and volunteering, and secondary sources. For data analysis, Indigenous methodological frameworks suggest a mixed-methods approach that combines interpretative meaning-making and discourse and/or thematic analysis (Kovach, 2010).

Therefore, I first analyzed how discourses relate or take form in the practices of Indigenous organizations. Other than taking language as constitutive of social reality (Phillips and Hardy, 2002: 12), this project's discourse analysis assumes that territories as lifeworlds go beyond what discourses express. Thus, I examine political discourses as manifestations of what interlocutors think, imagine, and say about spaces and places—i.e., the territories—as well (Villanueva, 2018).

Additionally, I used coding (manual and with Atlas TI software) to group findings and build themes according to my research questions and to other emerging common themes across data sources. My analysis engages with the perspectives of many of my research participants, seeking to capture them as fully as possible for this format, to give evidence of my interpretative meaning-making process. As a caveat, I acknowledge my own positionality as a South American mestiza scholar. As such, I am familiar with Indigenous thought and lifeways from diverse personal, academic, and professional experiences (from before and during this research project). But this positionality may also limit some of my comprehension of Indigenous ontologies and epistemologies.

In addition, being from Quito made the process of asking about, and being accepted to volunteer at COICA much easier, as this meant that I was already familiar with the political environments and challenges that Amazonian organizations face, and I was also familiar with, for instance, some of the NGOs that collaborate with COICA and the kinds of initiatives that they support. However, being a mestiza woman in organizations where men occupy the main positions of leadership sometimes meant that some leaders did not trust me with certain responsibilities (also as they sometimes thought that I was a young intern, since I

was volunteering). At the same time, this positionality facilitated my interactions and conversations with women leaders, as well as my participation in their political spaces. In this regard, it is important to note that my relationship with COICA leaders was mainly one of work colleagues rather than the typical one involving a researcher and research participants—even though they were always aware that I was carrying out research as well. Lastly, my experience working with COICA facilitated my interactions with leaders from the other organizations and my participant observation with such organizations.

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### **3. Research Article I:**

#### **Rethinking Climate Governance: Amazonian Indigenous Climate Politics and Integral Territorial Ontologies**

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#### **Introduction and Research Approach**

As fires raged across vast sections of Amazonia in Brazil, Bolivia, and Peru during the summer of 2019, Indigenous organizations from the region and beyond highlighted their role as Guardians of the Forest in the media. Only days before the fires started, the coalition found support for such a claim in an Intergovernmental Panel on Climate Change special report suggesting that securing tenure for Indigenous communities can be highly cost effective in reducing deforestation (IPCC, 2019). Studies also show that there are higher proportions of primary forest cover and carbon storage in Indigenous lands (Nepstad et al., 2006; Lu et al., 2010; Ricketts et al., 2010; Blackman & Veit, 2018). In the Amazon Basin—the largest tropical forest in the world—Indigenous territories represent more than 30 percent of carbon reserves but only 8 percent of deforested lands. Such reserves, scientists find, could be larger than those of the entire forests of the Democratic Republic of Congo and Indonesia combined (RAISG, 2017). These findings suggest that forest protection, climate change action, and Indigenous rights can be understood as one and the same goal in Amazonia.

Because of findings such as these, climate change has become a politically significant object for Amazonian Indigenous organizations. They are thus increasingly articulating their

struggles around the central role of Indigenous peoples in climate change action and designing strategies that incorporate Indigenous perspectives.<sup>11</sup> This paper analyses the Amazon Indigenous Initiative to Reduce Emissions from Deforestation (RIA), a climate change mitigation strategy created by the Coordinator of Indigenous Organizations of the Amazon Basin (COICA), and its ontological politics. COICA represents grassroots organizations from nine Amazonian countries and 500 ethnic groups. RIA is COICA's proposal for a unified Amazonian Indigenous vision on climate change mitigation—one that respects Indigenous development preferences and cosmologies, and “values forests as human-nature integrating systems” (Unkuch, 2014: 20). As such, it is part of COICA's strategic priorities for Amazonia that its Directive Council—i.e., one leader/coordinator from each country—defines every four years.

In representing forms of politics that go beyond the borders of nations and regions, both COICA and RIA are inherently transnational or global political spaces. RIA is also a response to a global phenomenon that stretches across all areas of the world: climate change. But while scholarly literature<sup>12</sup> is increasingly analyzing global politics as encompassing a wide variety of actors, networks, and initiatives that surpass the interplay of nation-states and intergovernmental institutions (e.g., Sassen, 2004; Santos & Rodríguez-Garavito, 2005), analyses of global environmental politics still largely focus on international negotiations and

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<sup>11</sup> I use the term “peoples” because Indigenous leaders across Amazonia prefer this term when referring to their ethnicity and identity. Other preferred terms include “nationalities,” although they are not so widely used. Terms like “tribes” can be considered inappropriate. “Peoples” can also encompass non-Indigenous groups such as Black collectivities.

<sup>12</sup> Particularly in the field of global studies.

treaties (e.g., Dauvergne, 2012). This is also the case in the literature about global climate politics in critical geography, which has focused on the neoliberal climate governance regime—including Reducing Emissions from Deforestation and Forest Degradation (REDD+) as the leading climate mitigation mechanism to be implemented in tropical forests around the world.

Political ecologists have argued that REDD+ is premised on commodifying nature, simplifying the definitions and uses of forests, and perpetuating extractive development (Fogel, 2004; Peet et al., 2010; Bernstein, 2013; McAfee, 2016). This literature recognizes that REDD+'s approach has clashed with Indigenous peoples' worldviews and perspectives and calls for the introduction of Indigenous elements in climate governance (Fogel, 2004; Reed, 2011; McAfee, 2016; Schroeder & González, 2019). However, it rarely accounts for cases where Indigenous-led organizations take the initiative in climate action. Moreover, critical literature about REDD+ has still to engage more deeply with scholarship about territorial and ontological politics. This is key in the context of Amazonia, where territorial struggles—in terms of physical access to the territories as well as their meanings—have historically been at the center of political conflicts (Hecht & Cockburn, 2010; Baletti, 2012; Lopez-Sandoval et al., 2017; Vela-Almeida et al., 2020).

Moreover, because ontologies reflect “collective assumptions about the kinds of entities that are thought to exist in the world” (Escobar, 2010: 56), the ontological dimension of climate/territorial politics represents the kind of world(s) and reality that political practices—or climate solutions—want to affect or enact.<sup>13</sup> Further, since climate change is a

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<sup>13</sup> This applies to all political practices, whether they are Western and belong to mainstream climate governance, or if they are put forward by non-Western or marginalized groups such as



multidimensional phenomenon that affects diverse peoples and ecosystems, it is necessary to recognize how diverse lifeways and ways of understanding and relating with the world can represent adequate responses. Studying the ontological politics of RIA facilitates that recognition, illustrating how global climate politics can also articulate these different ways of relating with the world—in this case, with Amazonian territories. This type of analysis is scarce in the literature and challenges common assumptions of the kinds of politics (and actors) that are global and local. Critical geographers and anthropologists (Whatmore, 2002; De la Cadena, 2015; Escobar, 2015) have conceptualized ontological politics as central to analyzing ethno-territorial struggles, more sustainable designs of life, and how natural and supernatural beings participate in politics. However, they have yet to examine ontological politics at the global scale, as well as within climate politics and strategies.

In analyzing the ontological dimension of how Amazonian leaders conceptualize RIA, I start to fill those gaps and to reflect on whether we can conceive of global climate politics as “otherwise”—that is, as a politics that moves beyond Western political frameworks and builds on “practices of cultural, ecological, and economic difference for concrete projects of world transformation” (Escobar, 2007: 198).<sup>14</sup> I argue that RIA is a

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the Indigenous organizations that this paper refers to. Ontologies underlie Western and non-Western political practices, as this piece describes, and as Schroeder and Gonzalez (2019) also detail with respect to REDD+. As Arturo Escobar (2010, p. 56) explains, “[T]he modern ontology... has produced socio-natural worlds of particular kinds (e.g., plantations, genetically modified organisms) which have tended to be destructive of the biophysical integrity of the planet. Some relational ontologies, on the contrary, have informed—or can inform, in principle—more sustainable designs.”

<sup>14</sup> Decolonial scholars define politics and knowledges “otherwise” as those that are articulated as alternatives to both neoliberal and Marxist understandings of democracy, anticolonialism, modernity, capitalism, ontology, or epistemology. Otherwise is “to start from values that are outside modern Western frameworks, while not hesitating to relocate selective features of the

political practice for the defense of territories founded on what I call *integral territorial ontologies*—that is, on common conceptions of territories as indivisible entities that encompass multiple relationships not only between humans and nature, but also among more-than-human beings. I illustrate how RIA’s incorporation of these ontologies and more-than-human agency (of natural and supernatural beings, see Blaser, 2014) has effectively introduced a form of radical alterity to global forest and climate politics. As such, RIA challenges understandings of territorial planning and ordering; as well as the processes of individuation and valuation that facilitate the commodification of nature.

I support these arguments with evidence collected over twelve months of fieldwork, which took place across 2017, 2018, and 2019. I also worked with COICA’s Women’s Council (CWC) in 2020. This research sought to apply an Indigenous methodology to center Indigenous epistemologies and worldviews (Kovach, 2010) with a decolonizing research approach. This involved open-ended interviews, participant observation, and volunteering with COICA and the School of Political Training of the Organization of Indigenous Peoples of the Colombian Amazon (henceforth OPIAC School). The volunteering component had the purpose of supporting the organizations’ goals by giving back in ways that are useful to them (Denzin et al., 2008; Smith, 2013). Thus, I integrated some findings of this research into project proposals and RIA concept notes that I co-produced with COICA leaders, and into documentation that I prepared for CWC. Participants in the open-ended interviews (about 40) included Indigenous leaders/coordinators and technical professionals (men, women, and

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older frameworks within the new ones. It is to create a world in which other worlds exist” (Harding, 2016, p. 1,078, drawing from Escobar, 2007).

youth) and mestizo technical professionals. Interviewees were part of COICA's Directive or Women's Council, had leadership roles in COICA member organizations, or had been involved in REDD+ or RIA. Participant observation took place while volunteering and in spaces lead by COICA and Indigenous leaders—e.g., in assemblies or meetings. I also reviewed secondary sources (e.g., reports, declarations, Life Plans, and educational materials). As a caveat, I study the ontological dimension of a common political project, which reflects similarities across the ontologies and cosmovisions of Amazonian peoples—as identified by COICA leaders. I do not imply that ontology is the same for all peoples in the region.

In the following section, I explain how REDD+ and RIA become relevant for Indigenous politics in Amazonia. I then lay out a theoretical and conceptual framework, discussing critical perspectives about climate governance and its relationship to territorial and ontological politics in the region. Next, I put forward the concept of integral territorial ontologies—central to understanding Indigenous political practices in Amazonia, including RIA—and explain how they integrate the agency of more-than-human beings and various spheres of life and struggle. I conclude by reflecting on the possibility of decolonizing what we understand as global politics and practices to respond to climate change.

### **REDD+ and RIA in Amazonia**

REDD+ is the main international climate change mitigation mechanism that gives financial value to the carbon stored in forests. As part of the United Nations Convention for Climate Change, REDD+ supports national-led initiatives to manage forests sustainably and reduce emissions from forested lands (UN-REDD Programme, 2019). In Amazon Basin

countries, governments plan to implement it in coordination with environmental NGOs and private-sector entities. Because Indigenous territories comprise much of Amazonia's primary forest cover, REDD+ affects Indigenous communities and politics across the basin. REDD+ proponents seek the participation of Indigenous peoples, suggesting that this mechanism can simultaneously address climate change, conservation, and poverty alleviation goals.

However, political ecologists have questioned such claims, as the livelihood co-benefits have often failed to materialize in carbon offset projects (Osborne, 2015). Additionally, there are concerns about REDD+'s potential to commodify forests (McDermott et al., 2011; Osborne, 2015) while perpetuating inequality and extractive development models (McAfee, 2016).

Moreover, REDD+, and similar mechanisms such as Payment for Ecosystem Services (PES) have faced opposition among Indigenous, peasant, and civil society groups globally (McAfee & Shapiro, 2010; Reed, 2011; Beymer-Farris & Bassett, 2012; Gilbertson, 2017). Indigenous organizations, including in Amazon countries, have argued that nature is not for sale, or that REDD+ commodifies forests and does not question neoliberal capitalism, the source of climate change (Cholango, 2011; Gilbertson, 2017). Nevertheless, some Amazonian Indigenous communities have agreed to participate in REDD+ projects. José, a Shuar Ecuadorian leader, explains that the Surui—the first Indigenous group to adopt a project akin to REDD+ worldwide—agreed to engage in carbon markets to safeguard their territory against mining and logging.<sup>15</sup> Thus, he acknowledges, there are arguments for and against REDD+ in Amazonia, and COICA—in representing thousands of communities—

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<sup>15</sup> While this case was considered successful for many years, it is currently suspended due to several obstacles and increasing deforestation. COICA does not consider the Surui project as part of RIA.

needs to respect all positions. This, however, while also vindicating common struggles for territorial defense and fundamental rights.

In that context, COICA began conceptualizing RIA in 2012 as an alternative to REDD+ that would represent an Indigenous vision for climate action, and that could resonate with communities and organizations across Amazonia.<sup>16</sup> COICA proposed RIA, a Holistic Governance of Territories for a Full Life, drawing from Indigenous cosmovisions (Unkuch, 2014)—and so that Indigenous communities would be compensated for maintaining carbon sinks in forests without relying on carbon markets. In parallel, RIA would be another strategy for territorial defense and the interrelated struggles for autonomy and collective rights. As José explains, “RIA originates from the vision of our organizations and leaders, from how we see the forest. ... [I]t has cultural and identity aspects ... (and interprets) concepts like REDD+” (personal communication, August 2018).

COICA also positions RIA as vital for global climate stability. RIA documents explain that Indigenous *cosmovivencia* (cosmoliving/lifeways) has guaranteed high concentrations of primary forests, carbon reserves, and biodiversity in Indigenous lands (e.g., Unkuch, 2014). As such, RIA proposes to reduce greenhouse gas emissions while conserving biodiversity, increasing carbon reserves, and implementing forest management—the same promises of REDD+. But its approach includes principles that are markedly different: respecting Indigenous development preferences, titling, and consolidating Indigenous collective territories, holistically managing forests and territories, reducing direct and indirect

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<sup>16</sup> Drawing from previous proposals by AIDSESEP, the Peruvian Amazon’s Indigenous organization.

deforestation drivers, and “valuing forests as human-nature integrating systems” (Unkuch, 2014: 20).

Consequently, RIA supports Life Plans, which capture communities’ visions of a good life—through elements ranging from opposition to extractive industries and strengthening Indigenous cultures to promoting income-generating endeavors. Concerning the latter, COICA often promotes RIA, particularly to international NGOs and donors, as a project-implementation initiative. In this sense, RIA has been limited to short-lived projects with outcomes such as reports and studies about pilot sites in Peru, Colombia, and Ecuador. Only one pilot site, the Amarakaeri Communal Reserve in Peru, formally executes RIA through projects to commercialize Brazilian nuts—thus apparently not departing from conventional community development.<sup>17</sup>

However, my fieldwork revealed that Amazonian Indigenous leaders also conceive of RIA differently: as the everyday relations and practices that already exist and maintain forest/territorial vitality, directly linking it to how Indigenous peoples already engage in territorial planning and organization. In other words, they conceive of RIA as a joint climate response in Amazonia that is based on continuity rather than change. To unpack what this

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<sup>17</sup> Amarakaeri projects are funded by international NGOs and other donors (they are not market-driven). Likewise, the operations of the OPIAC School are currently funded by Norwegian cooperation. COICA similarly aims to gain more support from international NGOs, international cooperation, and global climate funds to carry out RIA and other climate initiatives. There are challenges and contradictions that emerge from collaborations with such international donors. However, detailing them goes beyond the scope of this piece, so I explore them in other work. Still, as this article also explains, there are elements of RIA, such as the existing relationships in the territory that maintain territorial vitality, that do not necessarily require funding—but rather, aspects like formal land rights or governments’ respect for communities’ self-determination (as RIA documents also recognize).

continuity means, I introduce the concept of integral territorial ontologies, in the context of scholarship about territorial and ontological politics. I also explain how this concept relates to RIA and Indigenous climate politics in Amazonia. But first, the next section gives an overview of critical scholarship about REDD+, to discuss how RIA and integral ontologies diverge from the dominant climate regime.

### **Global Climate Governance, Commodification, and Indigenous Peoples**

Analyzing the conceptions and purposes behind neoliberal climate governance is necessary to understanding RIA as a response to REDD+ and an alternative form of global climate politics. For political ecologists, this “market-based green governance” (Peet et al., 2011: 7) is an international regime—comprised of institutions, organizations, principles, decision-making procedures, and interstate treaties—that facilitates nature commodification, standardization, and simplification, as well as the pursuit of economic interests in the framework of sustainability (Fogel, 2004; Peet et al., 2011; Osborne, 2015). Further, in understanding governance as the political matrix of neoliberalism, this regime would silence popular participation, power relations, as well as social transformation, justice, and conflict (Santos & Rodriguez-Garavito, 2005).

REDD+ is the main mechanism to implement this type of governance in tropical forest ecosystems. Thus, commodification remains a powerful logic behind how REDD+ conceptualizes nature, involving processes such as individuation, valuation, and privatization (Osborne, 2015, p. 67). Individuation relates to turning forests into legible and tradable carbon units by extracting them from their embeddedness in social and ecological life

(McDermott et al., 2011; Osborne, 2015). Similarly, valuation emphasizes the exchange value of nature's elements, obscuring social, ecological, and cultural values and uses (Fogel, 2004; Osborne, 2015). Privatization "gives exclusive rights of a resource to an individual, group, or institution" (Osborne, 2015, p. 67). Further, REDD+ fosters a recentralization of forest management in national governments to implement such processes, which can undermine the autonomy, rights, and resources of rural communities (Phelps et al., 2010; McDermott et al., 2011; Osborne, 2015).

This economic valuation of nature inherent in REDD+ has clashed with Indigenous conceptions of nature in Amazonia and beyond (Reed, 2011; Shankland & Hasenclever, 2011). Consequently, it may appear contradictory that scholarly analyses focus largely on the participation of Indigenous peoples in REDD+/global climate governance and negotiations, rather than on alternative political proposals at the transnational scale. The former include analyses about integrating Indigenous knowledges<sup>18</sup> into forest regimes (Fogel, 2004), the increasing yet insufficient participation of Indigenous representatives in international negotiations (Schroeder, 2010), or the introduction of REDD+ safeguards due to Indigenous demands for rights (Wallbott, 2014). The emphasis has thus been on reforming REDD+ by including Indigenous representatives or knowledges, to achieve an effective implementation (Reed, 2011; Shankland & Hasenclever, 2011; Schroeder & Gonzalez, 2019).

Even when well-intended, such an approach can also be problematic. Indigenous and allied scholars note that the appropriation and integration of Indigenous knowledges into

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<sup>18</sup> I use *knowledges* in plural to refer to the plurality of knowledge and the diverse peoples that are present in the Amazon Basin. Scholars such as Escobar (2007) use the plural as well.



policies that follow Western purposes and ideas of nature can undermine Indigenous decision-making and resource use (Nadasdy, 2003; Simpson, 2004). Additionally, formal REDD+ participation mechanisms can often serve to legitimize government agendas rather than to influence final policy outcomes (Pham et al., 2014; personal communications, 2017). Moreover, a lack of attention to Indigenous transnational political organization and climate actions demonstrates a (colonial) assumption that Indigeneity is restricted to the local, while intergovernmental politics and institutions represent the global.

Conversely, Indigenous scholars have argued that analyses about climate change and Indigenous peoples must pay attention to self-determined climate politics and planning, while acknowledging the impacts of colonialism and capitalism (Whyte, 2017). Therefore, the purpose of this paper is not restricted to explaining how an Amazonian Indigenous climate proposal can influence or modify mainstream global politics and institutions. Instead, it is to show how that proposal represents another, self-determined form of global climate politics. As Robert, an Inga Colombian leader stated, COICA proposed RIA so that, “Indigenous peoples would be the ones who propose ... who tell their experiences, ... and show a more integral and holistic vision of the territory” (personal communication, July 2019).

### **REDD+ and Territorial Politics in Amazonia**

While political ecologists have focused on REDD+ as a strategy of forest carbon trading, it is now more commonly implemented through national action plans (Skutsch & Turnhout, 2020) that are part of national policies/strategies on climate change. In Amazonian countries, including Ecuador, Colombia, and Brazil, these plans promote Ordenamiento

Territorial (territorial ordering/planning—henceforth OT) and seek to reduce net deforestation by developing green markets and so-called sustainable productive activities—e.g., (monocultural) agriculture, cattle ranching, mining, and oil extraction (MAE, 2017; MMA, 2016; Minambiente, 2020). Thus, the aspects of valuating nature’s elements as commodities, and individuating them, still hold.

But additionally, this type of implementation calls for attention to the politics of territory in Amazonia, with which critical REDD+ literature can engage more deeply. This literature has started to address the concept of territory as a spatial governance unit (McCall, 2016), or a “model of collective ownership and management of vast forest areas” (Van Dam, 2011: 410) that REDD+ should account for to be effective. It adequately argues for “territorializing” global climate governance and REDD+ to legitimate land users’ rights and the “entitlements of forest peoples to govern their own lands” (McCall, 2016: 58), while recognizing the connections between territories and Indigenous rights (Van Dam, 2011). Yet, the principal focus is still on improving REDD+ as the form of governance, often through “new administration and management capacities” (Van Dam, 2011: 410). But territorial politics—particularly in Amazonia—have deeper histories, dimensions, and tensions that cannot simply be resolved through a different managerial approach.

Territorial struggles are at the center of political conflicts in Amazonia. These are over physical territories, but also over decision-making and territorialities—i.e., the symbolic and material meanings of space (Hecht & Cockburn, 2010; Baletti, 2012; Lopez-Sandoval et al., 2017; Vela-Almeida et al., 2020). Within OT, territory means a space that a normative-legal authority controls and organizes around axes of resource extraction, development, and conservation (Baletti, 2012; Lopez-Sandoval et al., 2017; OPIAC, 2019). Thus, OT is a

“technology of social/spatial ordering” that assembles “forces (repressive, economic, administrative), techniques (scientific, calculative, legal), and devices (property titles, credits, conservation payments)” (Baletti, 2012: 580). These are characteristics that REDD+ national plans share, and that reflect a “techno-industrial, statist ... scientific and environmentalist ... territoriality” that NGOs and the private sector also enforce (Baletti, 2012: 578).

Moreover, the activists who participated in my interviews were skeptical about extractive activities such as monocultures, oil extraction, or mining really being sustainable, as they have many environmental and social impacts—even if they help reduce net deforestation. Scholars further argue that agricultural intensification—one strategy to make monocultures sustainable by sparing land—can instead increase deforestation, as the “intensification of profitable land uses tends to enhance its spread rather than to confine it spatially” (Oliveira & Hecht, 2016: 267). Therefore, activists associate these activities with the extractivism<sup>19</sup> that is very present in Amazonia, where around 50 percent of Indigenous territories are under the pressure of ongoing or planned extractivist activities—going up to 78 percent in Ecuador and 93 percent in Guyana (RAISG, 2020). For Latin American geographers, extractivism follows a “territorial logic of colonial capital” that causes dispossession, violence, and profound impacts on Amazonian territories (Lopez-Sandoval et al., 2017; Vela-Almeida et al., 2020, p. 267). Thus, both OT and sustainable productive practices allow for the commodification of nature, as well as for state-centered and raw material-based development models (as in Baletti, 2012; Lopez-Sandoval et al., 2017).

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<sup>19</sup> The term “extractivism” relates to activities that remove large volumes of non-processed natural resources, particularly for export. This can include minerals, petroleum, and agricultural, forest, fishing, and touristic activities, among others (Acosta, 2017).

Conversely, the responses to these extractive logics, scholars argue, show that territories are also plural spaces of resistance where “a multiplicity of forms of life and social relations may flourish” (Vela-Almeida et al., 2020: 267). Concerning Indigenous peoples specifically, scholars note that after land rights were (somehow) met in several Amazonian countries, claims for territory expanded to include autonomy and self-determination (Lopez-Sandoval et al., 2017). In line with this, Latin American geographers have argued that a central contradiction in Amazonia surrounds territorialities from above (i.e., those expressed in OT and now REDD+), and those from below (i.e., of marginalized groups or communities in Amazonia). This as the latter represent the plurality of Amazonia, responding to multiple territorial logics and to heterogeneous ways of making social and spatial relations (Porto Gonçalves, 2001, as cited in Baletti, 2012; Vela-Almeida et al., 2020).

But my fieldwork also showed that Indigenous territorial defense in Amazonia—and RIA—includes but goes beyond assigning a different meaning to the territories; it is also a defense of lifeways and lifeworlds. As Clemencia, a Murui-Muina Colombian leader, explains:

The territory is the space of a community: where it lives and works, where culture was born, and sacred stories emerged. ... It is the area over which Indigenous (peoples) exercise their own law under principles of identity, the space where autonomy is applied. (OPIAC, 2019).

The next section details how the concept of ontological politics can elucidate important aspects of how territorial defense and RIA exceed the idea of territoriality. I also explain how the concept informs my analysis of Amazonian climate politics.

## **Ontological Politics and Territorial Struggles**

Ontology is a fundamental aspect in environmental politics because it represents the kind of world(s) and reality that political practices want to affect or enact. REDD+'s processes of commodification are rooted in a dualistic Western/modern ontology (Shankland & Hasenclever, 2011). According to decolonial scholars such as Arturo Escobar (2010), this ontology enforces certain constructs, including a separation of nature and culture, the idea of an autonomous individual separated from community, and the market as a self-regulating entity that is separate from social practice. These constructs, in turn, have produced or are coherent with socio-natural forms such as capitalism, the state, or industrial agriculture, where there is a primacy of humans over non-humans (Escobar, 2010). While these scholars do not explicitly refer to global climate mechanisms such as REDD+, their ideas are arguably applicable to it as well, since—as mentioned above—REDD+ is based on market-based approaches of environmental governance and emphasize nature's exchange value. In the specific context of REDD+, Schroeder and Gonzalez (2019) have likewise identified that Western ontologies are compartmentalized or fragmented, while Indigenous ontologies “see the territory as an integrated system (and) consolidate a collective identity based on ... cultural values” (p. 201).

Furthermore, RIA documents point to the centrality of ontology when explaining that forests are human-nature integrating systems rather than simply carbon stocks (Unkuch, 2014). Here, I analyze the contributions of cultural geographers and decolonial anthropologists writing about ontological politics. This is to go beyond comparisons of

different ontologies in REDD+ and to explain instead how a multiplicity of worlds of humans and more-than-humans (see Blaser, 2014) enter global politics.

“Ontology” refers to multiple worlds and realities rather than simply different cultures or worldviews (Kohn, 2013). Ontological politics encompass ontology and politics—i.e., the processes and practices of shaping reality and the conditions of possibility (Mol, 1999). Anthropologists and decolonial scholars have explained how the relational ontologies—which “eschew the division between nature and culture”—of Indigenous, Afro-descendant, and other collectives have informed or can inform more sustainable designs (Escobar, 2010, p. 56). Related to that, they employ the concept of ontological politics to illuminate how political practices can constitute strategies for the defense of life and relational ontologies (De la Cadena, 2015; Escobar, 2015). This facilitates a more textured understanding of ethno-territorial struggles in which non-humans actively participate. In an Amazonian context, Eduardo Kohn’s concept of “alter-politics” similarly refers to politics that not only emerge from opposition to current systems but from “another way of being ... that involves other kinds of living beings” (2013: 14).

To illustrate this, Marisol de la Cadena (2015) explains that when Quechua peoples mobilize to oppose mining projects, they do not defend a separate nature but their relational co-existence with earth-beings (e.g., mountains). Arturo Escobar (2015) likewise explains that Afro-Colombian movements defend “worlds with a dense network of materiality and interrelations between humans and natural and supernatural beings” (p. 29). This shows how relational ontologies disrupt modern politics’ ontological division between nature and humanity. Therefore, taking ontologies out of their contexts to input them in REDD+ (as some scholars suggest) would be problematic if not impossible.

Next, I draw from and extend these contributions to put forward the concept of integral territorial ontologies. These lie at the foundation of RIA and help explain how it incorporates the agency of more-than-human beings in global and interethnic climate politics. Thus, this facilitates thinking of ontological politics beyond local scales.

### **Integral Territorial Ontologies and RIA**

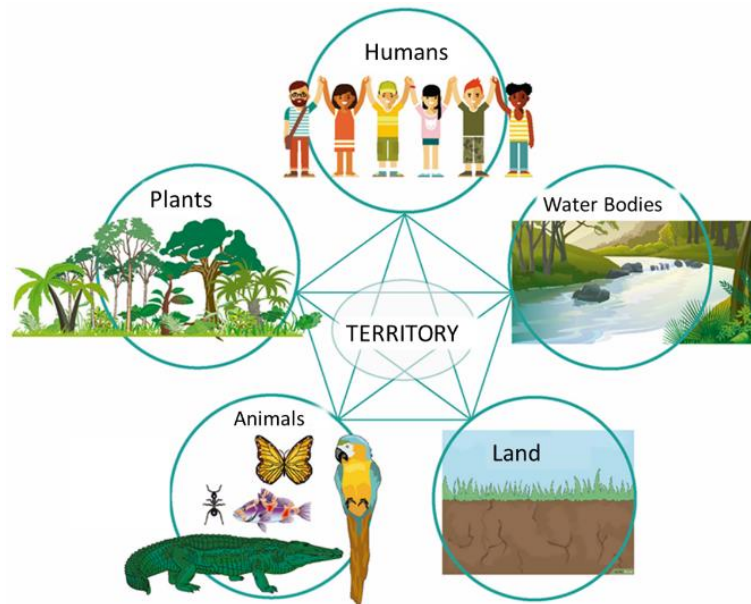
We said: We are territory, we are trees, we are river, we are gorge, we are land. This is, there is a coexistence of biodiversity with Indigenous peoples. Then, we could not accept, by any means, that things would go separate. That the State would commercialize the part of the forest while Indigenous peoples, as always, would not receive any benefits. (Alonso, Tacana Bolivian leader, personal communication, January 2019).

When I asked COICA leaders about the significance of a climate proposal like RIA, responses like Alonso's often emerged. While assessments of RIA's significance varied among my interviewees, a common theme crosscut their answers: An important problem with REDD+ was its focus on—and conceptualization of—trees and carbon as separate from the territory. That is, REDD+ ignored the relationships that exist between trees and animals, rivers, and humans. This view of forests—which equates them with carbon deposits—also facilitated their commodification, according to COICA leaders. Instead, within RIA, forests were not just carbon stocks, but represented the peoples' ancestors or spirits (COICA Amazonica, 2017).

Moreover, RIA is a conservation alternative that views forests and territories as integral systems. Here, I explain how those integral systems are conceived and how that influences understandings of territorial vitality and ordering. While research participants

represented various Indigenous peoples/ethnic groups and nine Amazonian countries, all of them argued that what brings them together is the struggle for the territory and what it represents for them and their communities. This was also similar for men and women—even though women referred more to territorial relationships that sustain nourishment and culture. Thus, my fieldwork revealed that the main unit of concern for Indigenous leaders was not the forest but the territories, which contain forests among many other elements. As Clemencia explains:

The territory is integral: (it is where) the work to reproduce the material culture (agriculture, hunting, fishing, gathering) takes place, the place that our creators left for us to live in. ... [I]t comprises ... the spaces that the non-Indigenous cannot see, the worlds which are below and above the Earth, which are inhabited by the owners of the jungle, of the animals, of the waters ... (OPIAC, 2019).



**Figure 3:** Life groups in Amazonian Indigenous thought (OPIAC, 2019).



This does not only mean that Indigenous peoples in Amazonia have a distinct, or spiritual relationship with nature, which some scholars have criticized as an essentialist view (e.g., Raymond, 2007). As leaders communicate, territories are indivisible entities, systems or lifeworlds that contain forests (or trees), biodiversity (or animals/plants), humans, sacred sites, water, underground resources (e.g., oil), supernatural beings, and other elements. Territories also comprise worlds that transcend the tangible one, often referred to as worlds of “above and below” or with names such as “yellow world” or “water world.”<sup>20</sup> In these multiple worlds, there are other beings—natural and supernatural—who create, maintain, and rely on territorial vitality, such as the owners of different elements. It is thus difficult to understand forests and trees without relating them to other elements or to the entire territory. Moreover, territories comprise a vast network of relationships among their different elements. As Figure 3 illustrates, life groups such as plants and animals are also connected to one another in the territory, as it “is constituted by the relationships between all life groups (including) functional relations (habitat, nourishment) as well as spiritual ones” (OPIAC, 2019). These particular ways in which Indigenous leaders conceive of territories constitute what I call integral territorial ontologies.<sup>21</sup>

As mentioned above, the literature about ontological politics (De la Cadena, 2015; Escobar, 2015) uses the concept of relational ontology to speak of worlds with a dense network of interrelations between humans and nonhuman beings. My concept of integral

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<sup>20</sup> In the case of the Shipibo peoples, as Marta, one of my interviewees explained (personal communication, April 2019).

<sup>21</sup> Due to the diversity of Indigenous cultures in Amazonia, I use “ontologies” to denote the plurality of ways in which this shared view of territories as integral entities can take shape.

ontologies seeks to take that concept further, to account for the wholeness of territories as life worlds. Territories, as leaders communicate, are simultaneously all-encompassing and a single entity—because everything is integrated (personal observation, January 2019). In these lifeworlds, humans and nature are not ontologically separated, and neither are natural—and supernatural—elements. This further reflects a non-anthropocentric, multispecies perspective in which “interactions between different non-human species are not necessarily mediated (only) through their interaction with humans” (Smart, 2014, p. 3). This also assumes that all beings are constitutively semiotic (Kohn, 2013) and that it is in their relations and communications that the vitality of the forest/territory lies.

Consequently, there are at least two ways in which integral territorial ontologies intervene in RIA and climate politics. First, one of RIA’s central premises is maintaining forest/territorial vitality, with the objective of “keeping the forest standing.” This is akin to initial proposals of REDD+ that focused on avoiding emissions from deforestation by maintaining forest sinks in various types of conserved landscapes (Hecht, 2011)—rather than on fostering “zero net deforestation” productive activities. For Indigenous leaders, this vitality is not feasible without the intervention of more-than-human beings and the fundamental relationships that exist in the territory.

For instance, for Joanne (Kali’na leader in Suriname) singing and talking to the spirit of the forest is necessary before cutting down a tree or taking a part of it. This because the forest keeps negative things away—e.g., poison—and so it is necessary to respect it. Similarly, supernatural beings can be associated with forest damage and deforestation. As Alonso describes, the Jichi are gnomes or forest owners who get angry when deforestation or excessive hunting or fishing happen, so they can abduct those responsible for such activities.

Likewise, other activities, such as food provision and the relationships that mediate them, sustain that vitality. Cecilia (Guajajara Brazilian leader) explained that nourishment is possible when following the rules about singing and asking Mother Earth for permission to plant. For her, the enchanted are the ones who protect people and territories, bring seeds and plants, and teach people how to cultivate. Maira—a god or enchanted—brought fish and staple foods such as sweet potatoes or maniocs, so people do not eat “senselessly” (personal communication, April 2019). This shows how supernatural beings, like the Jichi or enchanted, can have direct relationships with natural or nonhuman beings, such as manioc plants. Those relationships are independent from their subsequent relationships with humans.

Moreover, more-than-human agency and territorial relationships influence territorial ordering or planning. Leaders mentioned that some of the elements of the territory—and what they communicate—are used in territorial decision-making, including plants like ayahuasca (or yage), guayusa, and tobacco. Further, the manuals of the OPIAC School (2019) explain that the territories are ordered according to rules established in cosmovisions—i.e., involving the different worlds that are part of the territories—or in the peoples’ ancestral laws, which humans need to follow and respect. In the words of a Letuama leader:

Territorial organization happens through the “own”<sup>22</sup> government ... which relates to the rest of the Indigenous world: ... with nature’s beings (including) the owners of the trees, of the animals or of the rivers ... all of them relate through knowledge (and) thought. ... Therefore, concerning territorial ordering, we cannot only talk about how an ethnic group must order itself, but

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<sup>22</sup> I translate “*propio(s)*” as “own” for lack of a better word, but the Spanish meaning and use rather denote something characteristic of a group of people.

(rather) about how the traditional thought runs through special sites (to understand how territories are ordered). (OPIAC, 2019).

This contrasts very sharply with governmental OT—which organizes the territory according to interests to extract resources, drive development, or delimit conservation areas. This further illustrates how leaders include other worlds and natural and supernatural beings when referring to territorial ordering and planning.

Second (and related to the first point), all leaders expressed that territories are integral because they represent several spheres of life, including nourishment, medicine, and spirituality. As such, they are the space where Indigenous peoples can fully practice their cultures and lifeways. Women leaders further argue that territories are unitary because territories, bodies, and knowledges can be considered a single thing (personal observation, January 2019; see also Ulloa, 2016; or Vela-Almeida et al., 2020). For this reason, the slogan of the first Indigenous women’s march in Brazil was “Territory, our body, our spirit” and women leaders see the violence to the territories as interconnected with the violence inflicted upon women’s bodies. Territories thus represent both the physical and cultural survival of Indigenous peoples.

In this sense, Jorge (a Venezuelan Curripaco leader) and Enrique (a Brazilian Manchineri leader) explain that Indigenous peoples cannot exist as such without the territories, so defending the territories is a matter of life and death. They see territorial defense as necessary because “if they (territories) end, Indigenous peoples end” (personal communication, April 2019). Therefore, it would be impossible to restrict the value of the

territories, or of their different elements, to their exchange value, as in REDD+. Concerning this, Robert said:

We do not see the territory as a separated or fragmented unit, but holistically. ... [T]herefore, affecting a medicinal plant ... can affect the life of many peoples and ... condemn them to extermination. This has not been understood in the West ... so governments ... draw (oil) blocks and give concessions to transnational companies without understanding the vision of Indigenous peoples, (and thus they are) affecting our ... survival. ... (These actions) can affect the whole system, the whole Amazon Basin. (Personal communication, July 2019).

Therefore, territorial security—one of the purposes of RIA—does not only mean ensuring the access of Indigenous communities to their territories, or property rights, but also guaranteeing collective rights and life itself. For COICA leaders, the latter are threatened by the investments of states and corporations in big enterprises, which include hydro dams, mining, agribusinesses, and oil extraction, among others. Therefore, because RIA is inherently linked with this defense of the territories, it embraces resistance or social conflict against extractivism—instead of silencing it. This contrasts with several REDD+ national plans, where extractivist activities are often made invisible—e.g., when they identify agriculture as a main driver of deforestation without specifying which types of agriculture or other underlying drivers, such as road building and oil extraction (Skutsch & Turnhout, 2020; personal communications, 2017).

Altogether, integral territorial ontologies have a profound significance for forest protection and climate initiatives. As leaders explain, “RIA is an integral part of all Indigenous peoples, it is not separated. ... RIA is water, it is forest, it is the underground, it is integral” (personal communication, January 2019). Thus, diverging from the individuation

present in REDD+, RIA recognizes the embeddedness of carbon in the territories as social and ecological life. Conversely, in simplifying trees and forests as legible carbon units (McDermott et al., 2011; Osborne, 2015), mechanisms like REDD+ are neglecting all these relationships and beings, which are fundamental in explanations of territorial health and integrity. Moreover, RIA's approach departs from the fragmentation that is inherent in REDD+ and neoliberal governance, which facilitates commodification (Osborne, 2015; Shroeder & Gonzalez, 2019). By incorporating the territories, RIA is exceeding the possibilities of mainstream governance (as in De la Cadena, 2015), while introducing radical difference (as in Blaser, 2014) to global forest/territorial politics.

It is true that many external actors, such as international organizations and donors, still read RIA as a project-implementation initiative. This may be because this form is more legible, as it is more "amenable to the technical requirements of capital" (Osborne, 2015: 75). Thus, it might be complex for RIA, and Amazonian Indigenous organizations, to present a more visible confrontation to neoliberal governance.<sup>23</sup> But RIA already represents a form of global climate "alter-politics," in emerging from other ways of being and involving "other kinds of living beings" (as in Kohn, 2013: 14), which must be recognized. RIA makes visible both a different way of conceiving politics, and an important response to climate change. This can deeply change what we understand as global climate politics and the actors who partake in them.

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<sup>23</sup> And this presents several challenges to COICA's operations, which I will explore in future work.

## Conclusion

This paper has analyzed the ontological politics of RIA, a climate change mitigation strategy created by COICA, the Coordinator of Indigenous Organizations of the Amazon Basin. This initiative seeks to place Indigenous lands, cosmovisions, and politics at the forefront of climate change action. I have further questioned how RIA can challenge the premises of the—much criticized—neoliberal regime of climate governance, while engaging with and extending discussions about territorial and ontological politics in Amazonia. While doing so, I have accounted for, centered, and amplified the perspectives of Amazonian Indigenous leaders.

I argue that RIA is founded on what I call integral territorial ontologies. In these ontologies, territories are indivisible entities or lifeworlds that contain forests (or trees), biodiversity (i.e., animals/plants), humans, sacred sites, water, underground resources (e.g., oil), supernatural beings, and others. Territories further comprise a complex network of interrelations not only among humans and natural and supernatural beings (as in Escobar, 2015), but also among non-human beings. These territorial ontologies and interrelations intervene in RIA in at least two ways: First, they are fundamental in how RIA and its proponents understand forest/territorial vitality and territorial ordering. Second, they inform an approach that does not separate forests—and carbon—from the territories as the spaces that secure Indigenous peoples' cultural and physical survival. As such, RIA's conceptualization challenges the processes of fragmentation, individuation, and (economic) valuation that are part of REDD+—and mainstream climate governance—and that facilitate the commodification of nature. It also challenges top-down forms of territorial ordering (or

planning), which often prioritize extractive activities and developmentalism. Additionally, RIA embraces—rather than silences—territorial struggles such as those against extractivism.

Moreover, by incorporating integral territorial ontologies and more-than-human agency (see Blaser, 2014) in RIA, COICA effectively introduces a form of radical alterity to global forest and climate politics. This should encourage scholars to decolonize our thinking to see beyond hegemonic governance and consider global politics that emerge from other ways of being. It should also encourage scholars and technical professionals to understand climate change mitigation in tropical forests in a more integral way—one that considers other ways of living, other explanations of how to keep forests standing, and other knowledge-based practices. Additionally, this paper problematizes and sheds light on the limits of instances such as REDD+ safeguards and its participatory spaces, which seek to introduce Indigenous elements to REDD+ while separating them from their broader contexts. As a caveat, a challenge remains for Amazonian Indigenous organizations to implement RIA fully in accordance with these holistic territorial ontologies while also responding to the ever-changing and diverse realities in the region, as well as to the requirements of international organizations and donors upon which they often rely. This is an aspect that the scholarly literature should explore in more depth (see also Article III).

Finally, to fully understand RIA's possibilities, a more in-depth analysis of its epistemic and socioeconomic aspects is necessary. I do this in Article II and III, and plan to explore this in future work. Additionally, it is essential to recognize that RIA is only one strategy for defending the territories. There are multiple other political practices—e.g., actions rejecting oil and mineral projects—that share the same purpose of defending those integral ontologies, and so, life itself (as in Escobar, 2015). These practices are unfolding at



all scales of Indigenous political organization, and, directly or indirectly, confront the threats that climate change and other factors pose to the territories' integrity. There are also other political initiatives at the global scale that confront climate change, such as the Global Alliance of Territorial Communities (which involves COICA and organizations in Indonesia, Brazil, and Mesoamerica); and other Indigenous spaces of resistance to extractivism that have had a global character, such as Standing Rock (Estes, 2019).<sup>24</sup> Thinking about these spaces, and RIA's role in relation to them, calls into question what we understand as global climate politics, beyond the dominant climate regime. Therefore, further research is necessary for a more complete understanding of Indigenous climate politics—and those of other marginalized groups—to open the possibilities to consider everyday practices to engage with the territory and political action to face climate change in a more holistic way.

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<sup>24</sup> See <https://globalalliance.me/>.

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## 4. Research Article II:

### Scaling-up Territorial Knowledges: Boundary-making in Amazonian Climate Politics

#### Introduction

*Indigenous and traditional peoples across Amazonia... are protecting this great rainforest and our climate for all of us, for our children, for all humanity... They have a lot of wisdom to teach us...*

*(Representatives of Amazon protection NGOs)*

In the past couple of decades, scholars and activists have highlighted the importance of Indigenous knowledges (IK) to confront climate change. Scholars argue that securing Indigenous lands can be key strategies to slow climate change (e.g., Ricketts et al, 2010), as these lands exhibit lower rates of deforestation and degradation, along with higher proportions of primary forest cover and carbon storage (Blackman & Veit, 2018; IPCC, 2019). For many, Indigenous cultural practices and knowledges are what maintain those lower rates of deforestation in Indigenous lands, as well as forest vitality (e.g., Lu et al, 2010; OPIAC, 2019). Thus, scholars and activists have called for the inclusion of IK in global climate governance (e.g., Jasanoff & Martello, 2004). However, analyses of how Indigenous organizations respond to the calls to include their knowledges in climate strategies remain scant.

This paper analyzes how Indigenous, or ancestral, knowledges are articulated in self-determined and plurinational Amazonian Indigenous climate change politics at different scales. Indigenous leaders employ the concept of ancestral to refer to those knowledges, epistemologies, and practices which emerge from the historical relationships of Indigenous

peoples and territories.<sup>25</sup> Ancestral knowledges (AK) are passed from generation to generation and are part of different areas of life including medicine, nourishment, and forest vitality. Those historical relationships are what validate AK and make them equally (if not more) valid when dealing with the environment or climatic changes. Moreover, Amazonian Indigenous organizations use the term IK based on common, and historical, Amazonian Indigenous struggles and identity;<sup>26</sup> for these reasons, I employ the terms AK and IK interchangeably. Further, because of the diversity of Indigenous cultures in Amazonia, I use *knowledges* to denote this plurality.

More specifically, I study two climate initiatives where Indigenous organizations in Amazonia are drawing boundaries to define and scale-up AK. First is the Amazonian Indigenous Initiative to Reduce Deforestation (RIA) created by the Coordinator of Indigenous Organizations of the Amazon Basin (COICA). RIA articulates a unified Amazonian Indigenous perspective on climate change mitigation that incorporates AK, Indigenous cosmologies, and life plans. Because COICA represents organizations from nine countries and 500 Indigenous peoples, RIA is perhaps the only initiative that can show how AK becomes relevant in Amazonia-wide and transnational politics. Second is the School of Political Training of the Organization of Indigenous Peoples of the Colombian Amazon (henceforth OPIAC School). In addition to identifying knowledge categories applicable

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<sup>25</sup> “Peoples” is a preferred term among Indigenous leaders across Amazonia when referring to their ethnic affiliation and identity—other preferred terms include “nationalities.” Terms like “tribes” can be considered inappropriate. “Peoples” can also encompass non-Indigenous groups such as Black collectivities.

<sup>26</sup> Although not without difficulties/contradictions.



across the Colombian Amazon, this Amazonian initiative best illustrates processes of “boundary-making” that demarcate AK from Western/scientific knowledges.

I argue that through boundary-work, RIA and the OPIAC School are simultaneously reinforcing and moving beyond binaries like traditional/modern, local/global, while also scaling-up territorial knowledges. For instance, RIA and the OPIAC take AK beyond the local scale while also upholding AK’s inextricable link to Indigenous territories as lifeworlds (see Article I) and to territorial defense. Analyses of boundary-work are common in the Science and Technology Studies (STS) scholarship, referring to when, how and to what ends boundaries that separate science from non-science are drawn and defended (Gieryn, 1995). Scientists and other actors often draw such boundaries to maintain the cognitive authority and credibility associated with science (Gieryn, 1995). Postcolonial STS and decolonial scholars also refer to the cognitive authority of science when arguing that colonial projects created an epistemological divide, with corresponding power relations, between “universal science and local knowledge” (Philip, 2004; Subramaniam et al, 2017). However, not only are these strands of STS literature rarely in conversation (Pereira, 2019), but the boundary-making literature concentrates almost exclusively on scientists and their interests in delimiting science (e.g., Gieryn, 1995, Kinchy & Kleiman, 2003; Barandiaran, 2018). Here, I demonstrate that Indigenous actors involved in RIA and the OPIAC School also engage in boundary-work, strategically drawing boundaries around AK to pursue their political goals. Therefore, this analysis expands the boundaries of STS itself (as in Rajão et al, 2014) by applying some of its analytical tools to other-than-scientific knowledges.

Postcolonial STS scholars often argue for overcoming the dichotomies between a universal, scientific knowledge and localized knowledges (e.g., Anderson, 2002), while other

STS scholars argue that global climate science dominates how international governance defines and addresses environmental problems (e.g., Jasanoff, 2010; Miller & Edwards, 2011). So, they argue for incorporating “the local” into global environmental politics (Jasanoff & Martello, 2004). Moreover, this literature holds that science is not universal since all knowledge is situated (e.g., Jasanoff & Martello, 2004). Yet, in these analyses, Indigenous knowledges—and peoples—are largely restricted to local scenarios (Forsyth & Walker, 2008) and politics, while the ‘global’ is defined as intergovernmental politics, their negotiations, and mechanisms (e.g., Schroeder, 2010; Wallbot, 2014).<sup>27</sup> Thus, not only is there a lack of attention to self-determined Indigenous climate politics and how IK inform them, but also to how the global or transnational can be represented in Indigenous organizations and knowledges. Here, rather than examining AK in specific communities, I analyze the role of AK in politics beyond the local.

The following two sections lay out this paper’s theoretical and conceptual background, as well as the methodology. The third section illustrates how actors involved in RIA and OPIAC School are engaging in processes of boundary-making and scaling-up AK. The conclusion discusses how to expand our understandings of the links among knowledge, power, and climate change politics.

## **Literature review**

### ***Boundary-work, Power, and Colonialism***

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<sup>27</sup> While scholars in Global Studies argue for overcoming “methodological nationalism” and recognizing how global politics involves different actors, networks, and initiatives (e.g., Sassen, 2004).

This paper employs the concept of boundary-work to illustrate how and why RIA and the OPIAC School define and distinguish IK from other knowledges. Here, I put relevant insights about boundary-work in conversation with postcolonial STS and decolonial discussions about science and power.<sup>28</sup> These strands of literature are seldom in conversation, but this is necessary since the “legitimation of knowledge-claims is intimately tied to networks of domination and exclusion” (Pereira, 2019: 344). Moreover, this is fundamental to demonstrate how Indigenous actors also engage in boundary-work, which can expand the reach of STS approaches to include other-than-scientific knowledges and their relations to politics and power.

According to Thomas Gieryn (1995), there are no set criteria that essentially distinguish science from other knowledges. Rather, scientists and other actors create boundaries around science based on social conventions and driven by specific interests. The latter involve “contending for, legitimating, or challenging” the superiority or cognitive authority of science in “producing truthful claims about the world” (p. 395). This, because science’s position of privilege “affords credibility, prestige, power, and material resources” (p. 405). In addition to separating science from non-science or other knowledges, boundary-work also takes place in efforts to demarcate science from politics and values. The purposes of such efforts also involve maintaining the credibility, autonomy, and cultural authority of science—even though that proves difficult (Jasanoff, 1990; Kinchy & Kleiman, 2003; Barandiaran,

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<sup>28</sup> While postcolonial STS and decolonial authors make similar observations regarding knowledge, power, and colonialism, they draw from and engage with different areas and traditions of scholarship. Decolonial theorists largely focus on coloniality in Latin America, frequently, but not always, referencing science. Harding (2016) and Lyons et al (2017) detail the points of convergence and divergence between the two.

2018) and is “never sufficiently convincing” (Gieryn, 1995: 423). An important arena for this type of boundary-work are cases of environmental decision-making (Kinchy & Kleiman, 2003; Barandiaran, 2018).

In the Latin American context, STS scholars such as Hebe Vessuri maintain that science is an absolute and superior reference in the region because of European colonialism and dominance (2007: 121).<sup>29</sup> Thus, a common assumption is that scientific activities in the region are subordinated or even inferior to “Northern” science—even though “innovation, invention, and discovery take many forms, occur in multiple contexts, and travel in many directions” (Medina et al, 2004: 2). Such differences in knowledges that are formally recognized as scientific aside, colonialism in Latin America also created a boundary between science and other knowledges which persists today.

For postcolonial and decolonial scholars, modernity/capitalism, science, and colonialism coproduced and co-constitute each other (Anderson, 2002; Subramaniam et al., 2017); as the “Spanish and Portuguese colonization of the Americas played an important role in the formation of modern social orders and, consequently, coproduction of their sciences” (Harding, 2016: 1066). This means that scientific development in Europe used colonized spaces, resources, and peoples to grow, drawing heavily from the knowledges of such colonized places (Harding, 2016; Subramaniam et al., 2017). Moreover, such modern social orders imposed gender, racial, and sexuality hierarchies (Quijano, 2000; Harding, 2016), which applied also to different epistemologies. Thus, “claims of modernity and its contrast with barbarianism and savagery... played an integral part in distinguishing Western scientific

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<sup>29</sup> Although this is contested, see Barandiaran, 2018.

ideas and practices from local knowledge systems that were encountered in the colonies” (Subramaniam et al., 2017: 412). Furthermore, in articulating what the practices of “proper” modern scientific inquiry were, scientists also assigned labels as “backward, uncivilized, and premodern” to the knowledge systems of colonized peoples (Subramaniam et al., 2017). These practices—e.g., the scientific method, experimentation, peer review, objectivity, skepticism (Gieryn, 1999: 22)—differentiated science from “superstition” or “beliefs” (Lyons et al, 2017). In the words of Walter Mignolo, the “colonial modernities” (e.g., those in Latin America) enforced an epistemic border when building a “frame and a conception of knowledge (which)... subalternized other (non-European) kinds of knowledge” (2000: 13). Thus, while STS does not explicitly refer to such distinctions between science and ancestral knowledges as a boundary, it is one that has become a “common sense notion” (as in Kinchy & Kleiman, 2003) for actors including Indigenous leaders, policymakers, and scientists.<sup>30</sup>

These historical legacies motivate some scholars to argue for dismantling the divide between Indigenous and scientific knowledges. For instance, Arun Agrawal (1995) argues that the term “Indigenous knowledge” tends to essentialize knowledge bearers or to romanticize this knowledge as inherently better than scientific knowledge. Anthropologists further argue that defining which group or population is Indigenous can be very challenging and is a politically contested endeavor (e.g., Escobar, 2007). However, Amazonian Indigenous organizations use the term as they find it suitable for their goals of self-determination and cultural survival. As Kim TallBear explains, “for Indigenous groups, adding the umbrella term (Indigenous or Indigeneity) to their people-specific identities (e.g., Maori, Cree, Dayak) helps organize their ongoing resistance to the authority of the genocidal

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<sup>30</sup> As my interviews reflected, see more below.

and/or assimilative (settler) colonial state” (2013, cited in Subramaniam et al., 2017). In that context, and in the cases that I analyze here, it becomes harder—and perhaps undesirable—to separate knowledge from political goals.

Indeed, the long history of establishing science as “the” universal and legitimate knowledge has run parallel to the suppression of other types of knowledges. The knowledge of “the publics,” particularly of marginalized groups, has historically been undervalued, dismissed, and misunderstood (Irwin & Wynne, 1996; Corburn, 2005). This “coloniality of knowledge” has also prevented the inclusion of Indigenous voices and their knowledges in global climate governance (Nuñez, 2018). But beyond a mere inclusion in climate politics, acknowledging these historical legacies involves recognizing the epistemic violence that the systems of capitalism and colonialism have executed towards marginalized groups. Scholars Laura Foster, Margaret Kovach, and Leanne Simpson therefore call for decolonizing knowledge and adopting anticolonial strategies for the recovery and maintenance of Indigenous knowledge systems.

As I discuss below, RIA and the OPIAC School represent that kind of strategy in Amazonia—within the specific framework of climate change. I also show how, in defining ancestral or Indigenous knowledges in relation to scientific knowledges, RIA and the OPIAC School are recognizing the epistemic power relationships that are inherent in questions of environmental/climate politics.

### ***Binaries in Environmental Knowledges and Politics***

Postcolonial and decolonial scholars have thus “worked to destabilize, or at least challenge, the assumption that Western knowledge is objective, authoritative and universally

applicable” (Anderson, 2002: 646). An essential part of that effort, they argue, is revealing and overcoming the binaries that have been established through histories of colonialism (Anderson, 2002). In addition to Western/Indigenous, such binaries include modern/traditional, global/local, first world/third world, among others. Here, I elucidate how such binaries are both prevalent and contested in STS (and adjacent) discussions about environmental knowledge and politics.

STS scholars have highlighted some issues around framing climate change and climate science as global. For Sheila Jasanoff (2010) science projects an impersonal, apolitical, and universal imaginary of climate change, that comes into conflict with the subjective, situated, and normative imaginations of human actors engaging with nature (p. 233). Similarly, Miller and Edwards argue that climatic scientific research has changed the conceptions of nature that underlie international politics—these now marked by thinking about the climate in global terms (2001: 3). Further, framing environmental problems and solutions as global can be challenging, as there are multiple visions of what is wrong with the environment (Jasanoff and Martello 2004: 9). For political ecologists, the dominant vision is that of actors who enforce a market-based climate governance, and so mobilize transnational scientific expertise to maintain political control over nature (Peet et al, 2010). This applies to international climate mechanisms for forest ecosystems, like REDD+ (Reducing Emissions from Deforestation and Forest Degradation), which privilege technoscientific expertise and tools—e.g., to measure and value carbon stocks (Thompson et al, 2011; Gupta et al, 2012; Cifuentes, 2017).

These issues around framing the climate as global have led to increased calls for including the local in global environmental politics (Jasanoff and Martello, 2004).

Environmental agencies and media publications similarly seek to engage more with “traditional ecological knowledge” (TEK)—i.e., communities’ traditional engagement with nature (e.g., Berkes et al, 2000). However, the terms local and traditional are highly contested, as they can reinforce binaries. Local has been “characterized as narrow-minded and part of a romantic past” (Corburn, 2005: 49). Additionally, arguing that some knowledge is local can reify the idea that another is universal and is “true in all places and at all times” (Bowker, 2005: 220). The term traditional has likewise implied knowledge that is static or lodged in an eternal past (Bowker, 2008; Foster, 2016).

Beyond the term, scholars have identified problems with the TEK literature itself, and with how NGOs and activists engage with TEK. They argue that—in the scholarship and in practice—TEK becomes relevant only as it relates to Western scientific frameworks and conceptualizations of environmental problems (Simpson, 2004; Forsyth and Walker, 2008) or to include in policies which follow the purposes of external actors (Agrawal, 1995; Simpson, 2004). This can lead to knowledge appropriation and commodification, to undermining Indigenous decision-making and resource use, and to neglecting Indigenous worldviews and concerns (Nadasdy, 2004; Simpson, 2004; Foster, 2016).

Therefore, to address and overcome binaries—and/or the assumption that science is universally applicable—STS scholars argue for the need to recognize that all knowledge is situated (e.g., Jasanoff and Martello, 2004; Subramaniam et al., 2017; Haraway, 1989). This means that all knowledge is tied to a locality, responds to a context, and is influenced by the politics of its bearers. Scholars also argue for attending to the “complex border zone of hybridity and impurity” (Anderson, 2002: 644). This means, as Cori Hayden notes, that



because IK or local knowledges have been influenced by Western knowledges, they are fluid and dynamic, and have “never been stable or static object(s)” (2003: 211).

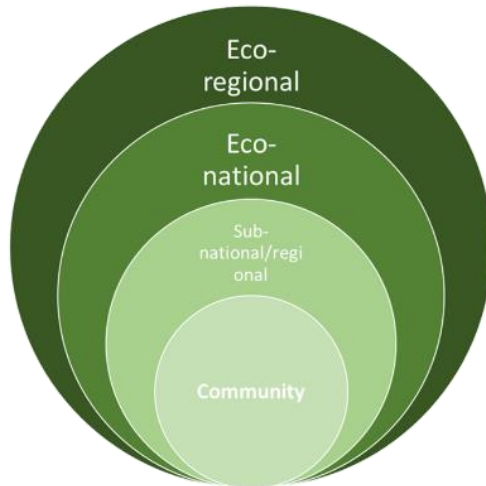
However, a central aspect in this discussion is that “the construction of both the local and the global crucially depends on the production of knowledge and its interaction with power” (Jasanoff and Martello, 2004). Thus, there are conceptual and political limits to arguing that knowledges are symmetrical or hybrid, due to the asymmetrical power relations of ongoing coloniality (Lyons et al, 2017: 35). Moreover, because knowledge and society—and the environment—are co-produced (Jasanoff, 2004), “how we understand and represent environmental problems is inescapably linked” to... (how) we choose to... solve them” (Jasanoff and Martello, 2004: 5). That is, there are power relationships involved in how actors select, prioritize, and use knowledges when dealing with problems like those of global environmental change (c.f., Mathews, 2011). Different knowledges can also represent different problem definitions and can propose different solutions that can have tangible impacts on the landscape and on people’s lives. Thus, as Boaventura de Sousa Santos notes, bringing to the picture alternative, non-scientific knowledges can create a “plurality of knowledge” that allows for different conceptions of human dignity, nature, and the world itself (2007).

Moreover, perhaps due to the very existence of binaries and colonial assumptions, even when STS scholarship contests the global character of science, the question of whether and how IK influence politics beyond the local remains largely unexplored. There are few, if any, analyses of how Indigenous organizations use AK in political spaces and self-determined climate initiatives. This paper shows how the treatment of AK in RIA and the OPIAC School challenges understandings of boundary-making, universality, and binaries in climate

knowledges and politics. These initiatives simultaneously reinforce, contest, and provide new meanings to those binaries and to terms like local and global. For instance, AK, as part of Pan-Amazonian and national initiatives, are not restricted to the local. Thus, like in Anna Tsing's "friction" (2005) the initiatives represent "global encounters across difference" (p. 9) while showing that the local scale and IK are not simply a counterpart to universal discourses like climate change. Moreover, this analysis shows that using binaries "may become necessary for the group on the exploited side of a binary, even though at the same time the group is trying to dismantle the binary itself" (Harding, 2016: 1077).

## **Methodology**

This research is multi-sited and qualitative, involving various primary and secondary data sources. My methodology applies two approaches that have not been integrated. First is a political ecology of scale perspective, which sees scale as socially, politically, and biogeographically defined (Neumann, 2009). Second are Indigenous methodologies, which incorporate a decolonizing lens and center Indigenous voices and epistemologies through conversational and open-ended methods—e.g., open-ended interviews and sharing circles (Kovach, 2010; Smith, 2013). Thus, I analyze two scales of Amazonian Indigenous politics, the eco-regional/Pan-Amazonian—represented in COICA and RIA—and the eco-national—represented in the OPIAC School (Figure 4). These are the Indigenous initiatives in Amazonia that most clearly take IK beyond the local scale and integrate them into climate politics.



**Figure 4:** Scales of Indigenous Political Organization in Amazonia.

During twelve months of fieldwork, I conducted over 45 open-ended interviews, participant observation, and a review of secondary sources. Interview participants included Indigenous leaders/coordinators and Indigenous technical professionals (men, women, and youth), as well as mestizo technical professionals. Leaders were elected members of COICA’s Directive or Women’s Council—representing each of the nine Amazon countries and different peoples—or of their respective organization. Technical professionals had been involved with RIA and/or the OPIAC School (e.g., in their design or implementation). A snowball technique allowed me to identify further participants (e.g., COICA leaders identified other individuals involved in RIA). Interviews inquired about Indigenous climate politics and knowledges in Amazonia, participant’s conceptions of forests and territories, among other themes.

I carried out participant observation while volunteering with COICA in its central office in Quito, and while volunteering in the Territory and Biodiversity program of the OPIAC School. This volunteering component allowed me to apply a decolonizing research

approach by supporting the organizations' political goals (as in Denzin et al, 2008; Kovach, 2010; Smith 2013). Consequently, I incorporated some findings in project proposals and documentation that I co-produced with COICA leaders. Lastly, the collection and review of secondary sources includes the OPIAC School's manual for the Territory and Biodiversity Program and other materials, RIA promotional materials, and COICA's declarations and reports.

### *Data Analysis*

The data sources that I examined include interview transcriptions, field notes from my participant observation and volunteering, and secondary sources. For data analysis, Indigenous methodological frameworks suggest a mixed-methods approach that combines interpretative meaning-making and discourse and/or thematic analysis (Kovach, 2010). Therefore, I first analyzed how discourses relate or take form in the practices of Indigenous organizations. This analysis takes language as constitutive of social reality (Phillips and Hardy, 2002: 12) and assumes that territories are lifeworlds which go beyond what discourses express. Thus, I examine political discourses as manifestations of what interlocutors think, imagine, and say about the territories as well (Villanueva, 2018).

Additionally, I used coding (manual and with Atlas TI software) to group findings and build themes according to my research questions and to other emerging common themes across data sources. My analysis engages with the perspectives of many of my research participants to give evidence of my interpretative meaning-making process. As a caveat, I acknowledge my own positionality as a South American mestiza scholar. As such, I am

familiar with Indigenous thought and lifeways from personal and professional experiences. But this positionality may also limit my comprehension of Indigenous epistemologies.

## **Findings**

### ***RIA: Reaffirming a Boundary to Challenge it***

RIA, or the “Program of Holistic Management of Forests and Biodiversity in Indigenous Territories to Combat Climate Change,” emerged as an Indigenous alternative to the international REDD+ mechanism (Article I). RIA documents explain that Indigenous territories represent around 30% of Amazonia but only 2% of them are deforested, so they stock between 30 and 46 million tons of carbon (COICA, 2019). For Indigenous leaders who proposed RIA, AK are a main reason why Indigenous lands keep these higher proportions of primary forest cover and carbon storage. Therefore, in this section I analyze how COICA leaders envision AK’s role in RIA, given their importance in climate change mitigation strategies.

Ancestral knowledges are a central component of RIA, along with land titling, viewing forests as “human-nature integrating systems” (Unkuch, 2014) and *Life Plans*—which capture communities’ visions of a ‘good life’ through elements ranging from opposition to extractive industries and strengthening Indigenous cultures to promoting income-generating endeavors. In other words, RIA highlights:

“The value of the integrality of Indigenous territories... traditional knowledges and collective rights, with a vision that goes “beyond carbon capture,” inviting the adoption of an integral vision and a holistic approach... (which contests)

development models that are antagonist to the... equity and resilience of Amazonian peoples and the planet.” (COICA, 2019)

Therefore, AK is the glue that holds RIA together: the program signals AK out as a significant commonality among Amazonian peoples, despite the diversity of their cultures and “Indigenous economies” (COICA, 2018). The role of AK within RIA is central both in keeping the forest standing, and as part of alternatives to deforestation (COICA, 2019). Yet, the meanings and specific types of AK remain unpacked in RIA documentation—especially that which refers to the entire Amazon Basin. COICA leaders often refer to RIA as the ancestral practices and relationships that have historically ensured—and continue to ensure—territorial vitality (see Article I), yet RIA is also a project-implementation initiative, which has had pilot projects in Colombia, Ecuador, and Peru. Among these, only the Amarakaeri Communal Reserve in the Southern Peruvian Amazon currently executes RIA, through community development projects and studies—which, for instance, define certain areas where AK are important in maintaining forest/territorial vitality. As one of these studies mentions, RIA seeks to

“Revitalize the living cultures of the Harakbut, Machiguenga y Yine peoples, the(ir) ancestral knowledge about nature, the names of plants (and) animals... the hunting, gathering, and fishing practices, the use of medicinal plants...” (Yagui and Mena, 2017: 29)

In my interviews, Indigenous leaders from across the Basin identified similar areas when discussing AK’s importance for territorial vitality, along with others such as agricultural practices.

But beyond specifying the types of knowledges and practices that keep forests standing, COICA leaders and RIA materials draw a boundary between AK and science while

questioning the role of science and the actors who uphold it. COICA leaders argue that scientists and states have historically undervalued and marginalized AK—echoing scholarship on IK and power (e.g., Simpson, 2004; Santos, 2007). For Jorge (Venezuelan Curripaco leader): “the division between Indigenous knowledge and scientific knowledge is the same as the relationship between the vision of the UN, governments, and science to fight climate change, (and how they) view Indigenous peoples” (personal communication, April 2019). In his view, actors like the UN, governments and science enforce a relationship of superiority towards Indigenous peoples. This is expressed in statements such as, “scientists recognize that there are (ancestral) knowledges, but (argue) that science must prove what we know” (personal communication, April 2019). Similarly, for Miguel (an Achuar technical professional), RIA seeks to make AK compatible with science because such actors often perceive AK as “mythological.” He mentioned that government officials and scientists will only find AK “respectable” if there is scientific evidence that can validate and demonstrate it. This contrasts with how, for him, Indigenous peoples validate AK: “when you practice it, discover it, feel it, suffer it” (personal communication, July 2018). For many research participants, the historical character of AK and continuous presence of Indigenous peoples in Amazonian territories are the sources of AK’s validity.

But leaders simultaneously appealed to the “universal imaginary of climate change” (as in Jasanoff, 2010: 233) and climate change institutions to advocate for and validate AK. RIA promotional materials mention that “Indigenous peoples have unique traditional knowledges about forests, today recognized by the Paris Agreement” (COICA, 2019). Jorge similarly noted that for the international community, “the best conserved territories are where Indigenous (peoples) are, where there is a higher likelihood to... confront climate change.

So, they say that this is (because of) Indigenous knowledges” (personal communication, April 2019). In these ways COICA leaders both recognized a persisting hierarchy that places international (Western) actors at the top, while insisting on placing AK “at the same level as science.” Likewise, RIA documents state that climate solutions “should not be limited to Western scientific knowledge, but also include... ancestral wisdom, innovation, and practices” (COICA, 2010).

For COICA leaders, a central and unique characteristic of AK is their inextricable connection to Indigenous territories and their defense. AK thus are not just instrumental, for example to conservation, or, as in co-production, they not only shape society and the environment. AK are also inseparable from the territories. This contrasts with scientists’ aim to objectively study an external nature. As Robert, a Colombian Inga leader, explained:

“The territory is an integrated, complex system with subsystems (including) traditional knowledge... These systems are the guiding principles to develop climate change actions... (they are) ... what has kept us going forever... (Orality and) knowledges are for the conservation of our life and our culture... Our wise men/women are our scientists (and through them) we have contributed for the world to have climate balance.” (Personal communication, July 2019).

Therefore, there is neither a separation of ancestral knowledges and “nature,” nor is there a boundary between knowledges and political goals. As Banu Subramaniam and colleagues note, IK can be organized “within systems in which many diverse humans and nonhumans together constitute ways of knowing the world” (2017: 420)—like the territories. These knowledges, as Robert noted, are not only key for climate change actions but also for territorial defense and Indigenous physical and cultural survival.



### ***The OPIAC School: Drawing Boundaries for Culturally Aware Leadership***

OPIAC created its School of Political Training to “support Indigenous Peoples of the Colombian Amazon in their defense of life, autonomy and territories, by training their own leaders integrally” (OPIAC, 2020). The OPIAC School trains young or future leaders of the Amazonian Indigenous Movement in Colombia, so students belong to any of the 59 Indigenous peoples of the region. One of the School’s purposes is to strengthen Indigenous cultures in view of colonizing education processes, by promoting a sense of belonging and recovering knowledge systems that are “*proprios*” to Amazonia—i.e., that are characteristic or unique to the region’s peoples (OPIAC, 2020).<sup>31</sup>

The OPIAC School’s activities began in 2016, with a project funded by the Norwegian Agency for Development Cooperation’s (NORAD) Climate and Forest Initiative. Thus, its existence is also tied to a global concern with climate change, which values AK for keeping deforestation low. As NORAD’s website explains: “Given the significance of Indigenous Peoples’ role in protecting Amazon forests... the project will map Indigenous Peoples’ own knowledge systems regarding ecosystem management” (NORAD, 2016). The main venue for the OPIAC School to achieve that is its Territory and Biodiversity Program, which integrates several interconnected modules about climate change and territorial defense. These modules include “Cosmovision and Territory”; “Amazonian Chagra” and “Knowledge, Use and Management of Nature”, among others.<sup>32</sup>

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<sup>31</sup> I use the word in Spanish as there is no direct translation.

<sup>32</sup> Chagra or conuco are Indigenous agricultural parcels/systems in Colombia. In Ecuador and Peru, the term is chacra. Leaders note that there are similar systems (in form and symbolism) across Amazonian cultures, even though they acquire different names in different languages. I use chagra here for consistency.

In contrast to RIA, the OPIAC School explicitly defines AK and why they are important. The modules further demonstrate explicit boundary-work done by the OPIAC School. The school makes an analogy between a *katumare de saberes* (or “woven basket of knowledge”) and its pedagogical model and thematic content. The *katumare* symbolizes the gathering of contents and different types of knowledges, and aspects like flexibility and practicality (OPIAC, 2020). Moreover, this model consists of four principles, or categories, that run throughout the modules—i.e., both in the manuals’ text and in the structure of the classes: “*propios*,” appropriated, foreign, and imposed knowledges.<sup>33</sup> These terms do not have strict definitions, but there are clear boundaries between them, as best illustrated by the teaching module, “Knowledge, Use and Management of Nature.”

The content of this module is organized into four parts, described thus (OPIAC, 2018):

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<sup>33</sup> Apropiado, ajeno e impuesto

1) *Knowledge “Propio”: Ecological Calendars.* For the OPIAC School, calendars portray the dynamics and relationships between the elements of nature, as in natural cycles—e.g., of rain, river levels or harvests. Thus, they “allow for the knowledge, prevention, care, protection and use of nature” (OPIAC, 2018). They also show the interconnectedness and multidimensionality of territories and “Amazonian thought.” In addition, the manuals highlight aspects that separate knowledges “propios” from others (i.e., Western). For instance, the circular or cyclical conception of time—illustrated in the calendars—is markedly different from the Western, lineal one (Quiroga, 2009 as cited in OPIAC, 2018). During class, students must consult with the elders or family members in their communities, who are knowledgeable about the calendars, and create one that represents the cycles in their territory (Figure 5).



**Figure 5:** Ecological Calendar, Yucuna Peoples. Elaborated by students at the OPIAC School's Territory and Biodiversity Program in 2019. Photo by the author.

2) Foreign Knowledge: Climate Change. This part identifies as foreign concepts such as the greenhouse effect and climate change, governance mechanisms like the Kyoto Protocol, and the knowledges that inform them. One learning outcome of the course is to define such concepts so students can then “appropriate” them. Therefore, in an in-class activity, students must identify how the climate has changed in each of their territories. In this process, students are also encouraged to find out about elders’ accounts of how the climate was in the past, and to identify how the climate cycles have been altered (OPIAC, 2018). This so they can start to “appropriate” these knowledges.

3) Appropriated Knowledge: Transformations and Adaptations to Confront Climate Change in the Territories. The purposes of this part are for students to identify the transformations in the territories that are threatening the survival of Amazonian Indigenous peoples, their causes, and possible alternatives. This knowledge is “appropriated” as it refers to “foreign” knowledge that Indigenous people (leaders, elders, cultivators, etc.) are now actively using and combining with their own knowledges and practices. For instance, the manuals explain that elders identify climatic changes and encourage others to follow the guidelines of ecological calendars to “avoid disease.” Further, elders identify how climate change has modified the calendars’ cycles. The manual thus advocates for keeping AK alive and “respecting the ‘owners’ of each of the (territory’s) elements, in a relation of reciprocity” (OPIAC, 2018).<sup>34</sup>

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<sup>34</sup> I.e., The “owners” of territorial elements like forests or rivers are supernatural beings who often inhabit worlds “above or below” that are also in the territories. See more in Article I.

*4) Imposed Knowledge: REDD+ and Payment for Ecosystem Services.* Here, students learn about strategies like REDD+, the carbon market and payment for ecosystem services, and how they can impact the territories. The school sees these strategies as something that Indigenous leaders need to deal with—e.g., because the Colombian government implements them in Amazonia—even though they did not participate in their design. The school further raises questions such as how these strategies value nature or who benefits from them, while contrasting them to Indigenous conceptions of nature/the territories.

As in RIA, at the OPIAC School knowledges are not simply a tool to learn about nature: they are integrated into the territories. Another module, “Territory and Cosmivision,” explains for example that “the territory is a daily practice and a means to transmit knowledges, a world where (people) teach how to share life with others, and not simply a politically and culturally delimited space” (OPIAC, 2018). Therefore, AK is central to how the territories are ordered<sup>35</sup>, because “natures’ beings ... are all related through the knowledge (and) thought which are at the center (of the territory)” (OPIAC, 2018). This challenges the assumptions that policymakers can simply take AK (or “the local”) to integrate them into a global climate governance that, by and large, has excluded Indigenous peoples from its design, and highlights the importance of Indigenous-led and self-determined climate strategies.

### **Discussion: Drawing Boundaries to Scale-up Territorial Knowledges**

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<sup>35</sup> “Ordenamiento territorial” in Spanish.

Boundary-making in RIA and the OPIAC School reflect issues that go beyond defining what knowledge belongs to and is unique to Amazonian peoples. I argue that by engaging in boundary-work, RIA and the OPIAC School are both using and defying binaries like traditional/modern, local/global, while also scaling-up territorial knowledges. This is evident in at least three ways.

First, a central purpose of delimiting and highlighting the ancestral character of IK is to demonstrate their validity without appealing to “scientific” evidence. Part of the reason why COICA leaders and the OPIAC School do boundary-work is to challenge the cognitive authority of science (as in Gieryn, 1995). But their purposes go beyond that. For these actors, historical processes, such as colonialism and the consequent marginalization of certain knowledges, are a reason why boundaries exist between different types of knowledge. This is important to them, even if they think that knowledges *should* be equivalent. Thus, seeing these knowledges as ancestral—or even traditional—does not necessarily log them into an “eternal past” in their perspective (e.g., as critiqued in Bowker, 2008). Particularly, the OPIAC School refers to ancient practices while also arguing that AK are central in the training of leaders who will engage in “modern” politics. This is the case even though some organizations, Indigenous or allied, often do essentialize knowledges and their bearers—mainly for communicational purposes.

Second, these cases demonstrate that the universal imaginary of climate change has become a tangible, politically significant object (c.f., Li, 2015) for Indigenous organizations. Thus, Indigenous leaders and the OPIAC School draw from knowledges that are “foreign,” like those of scientists and international institutions, to support their political purposes and territorial defense. As the category “appropriated knowledge” illustrates, elders sometimes

adapt their ecological calendars to knowledge about climate change. COICA leaders frequently use data about the low deforestation rates or the impacts of extractive industries in Indigenous territories. These forms of knowledge can also influence IK and “serve Indigenous peoples’ survival, (and) thriving, in colonial societies” (Subramaniam et al, 2017: 421), evidencing that IK are not “stable or static” objects (as Hayden, 2003 notes). However, this should not lead to conclusions that see all knowledge as hybrid—that is, a seemingly unproblematic mixture of Indigenous and Western knowledges (see Hayden, 2003). Rather, these boundary-making processes demonstrate that there are power relationships inherent in what and how knowledge becomes relevant for climate change and the territories. Perhaps the clearest demonstration of this is the category “imposed knowledge,” which may not support—and may even threaten—territorial defense (c.f., Article I). Moreover, the existence of power relationships is a reason why these initiatives intentionally seek to renew and promote AK. In this sense, RIA and the OPIAC School reflect “border thinking” in that they “engage the colonialism of Western epistemology... from the perspective of epistemic forces that have been turned into subaltern forms of knowledge” (Mignolo, 2001: 11).

Third, and perhaps most notably, these cases “scale-up” AK in Indigenous politics, challenging local-global binaries and understandings—particularly those binaries in which, as place-based and situated knowledges, AK are restricted to the local. Remarkably, the OPIAC School’s training in ecological calendars resonate with and are familiar to every participant despite their cultural differences. In fact, creating relevant content for all of the Colombian Amazon’s different peoples by finding commonalities among them is one of the OPIAC School’s main efforts. When I asked COICA leaders—who are from across Amazonia and different ethnicities—about the types of knowledges that are relevant for RIA,

several pointed also to ecological calendars or to knowledge about hunting, fishing, or harvesting cycles. For many of them, the knowledges involved in cultivating *chagras* are similarly important to prevent deforestation and so for climate mitigation. Likewise, the OPIAC School has a module dedicated to Amazonian *chagras* as knowledge systems. Other than agricultural cycles and techniques, these involve knowledges about seeds, soils, and using plant species for nutritious, medicinal, or spiritual purposes.

These examples illustrate how AK is scaled-up in RIA and the OPIAC school, becoming relevant at national and regional (or Amazonia-wide) scales of Indigenous political organization. Scaling-up is thus possible when the proponents of these initiatives find commonalities across knowledges that are relevant for Indigenous physical and cultural survival—and now climate change. This is not always seamless or uncomplicated. Pan-Amazonian initiatives like RIA can miss details, references to specific knowledges, or information about the different roles of knowledge holders such as elders, wise men/women, or cultivators. The leaders who directly participate in designing the initiatives may also privilege their own cultural knowledges. Still, these cases illustrate that while all knowledges are situated, AK are not strictly tied to the local.

Nevertheless, AK do have a “crucial place-based dimension” (as in Escobar, 2007: 286). RIA and the OPIAC School show that territorial/forest AK are part of (what I call) *integral territorial ontologies*—or conceptions of territories as indivisible entities or lifeworlds that encompass multiple relationships among humans and more-than-human beings. Thus, they are part of the central object of Amazonian Indigenous politics: the territories (Article I). The climate change strategies that COICA and OPIAC advocate for also incorporate this aspect and the place-based dimension of AK.



Consequently, borrowing from Tsing (2011), RIA and the OPIAC School can be read as concrete engagements or ‘friction’ through which the universal of climate change spreads around the world. But they are also fundamentally tied to the Indigenous political goal of territorial defense—which existed prior to that universal. RIA and the OPIAC School demonstrate the “unexpected and unstable effects of global encounters across difference” (Tsing, 2011: 3)—in this case through articulating AK in climate strategies. This shows that the universal imaginary of climate change does not simply come “into conflict with the subjective, situated and normative imaginations of human actors engaging with nature” (Jasanoff, 2010: 233). Rather, as Tsing contends, “universalism (can be) implicated in both imperial schemes to control the world and liberatory mobilizations for justice and empowerment” (2005: 9). Thus, while simultaneously employing and contesting binaries, these initiatives also expand the very meanings of local/global and universal within climate politics.

## **Conclusion**

This paper has analyzed ancestral knowledges (AK) and boundary-making processes in two Indigenous climate initiatives in Amazonia: RIA—created by the Coordinator of Indigenous Organizations of the Amazon Basin, COICA—and the School of Political Training of the Organization of Indigenous Peoples of the Colombian Amazon (OPIAC). These initiatives place Indigenous or ancestral knowledges at the forefront of climate change action, by recognizing their role in keeping forests standing in Indigenous territories.

My findings show how by engaging in boundary-work, RIA and the OPIAC School simultaneously reinforce and move beyond binaries involving Indigenous knowledges and

ideas about knowledge hybridity. First, they challenge the traditional/modern dichotomy, but also some critical perspectives about it. These initiatives appeal to the ancestral—or even traditional—character of knowledge, and to a historical relationship of Indigenous peoples and knowledges with Amazonian territories, to validate IK within modern politics. Second, while the initiatives recognize the interactions between AK and other/Western knowledges, they also acknowledge the colonial patterns and power relationships between them, complicating arguments about knowledge hybridity.

Third, and perhaps more notably, RIA and the OPIAC School challenge local/global dichotomies found in the STS literature but go further than these critical contributions. I show how AK are not restricted to the local since RIA and the OPIAC School are also “scaling-up” AK. They do so by categorizing and making these knowledges relevant at national and Pan-Amazonian scales of Indigenous political organization. Further, in scaling-up knowledges, RIA and the OPIAC School are both relating AK to a “universal imaginary of climate change,” while also maintaining AK’s inextricable connection to Indigenous territories. Even at these scales, AK is understood as part of the territories as lifeworlds (i.e., of integral territorial ontologies, see Article I) and territorial defense. This is the case even if scaling-up AK also risks erasing some particularities and differences among Indigenous peoples and knowledges.

Indigenous or ancestral knowledges have thus entered global climate change politics in diverse and unexpected ways. RIA and the OPIAC School demonstrate that the relationships between AK, climate science and global climate institutions are multifaceted and cannot be restricted to comparisons that place the AK in remote, distant locations and the climate science in the whole globe. Such relationships also respond to processes of

colonialism, of imposed neoliberal policies like REDD+ (c.f., McAfee, 2016) and to a historical marginalization of IK. Moreover, these initiatives—and others like the Global Alliance of Territorial Communities, which involves COICA and Indigenous organizations in Indonesia and Mesoamerica—demonstrate that Indigenous politics and knowledges also have a global character. For COICA and OPIAC, the recognition of the central role of AK in global climate politics becomes essential to the longstanding purposes of defending the territories and life itself.

Findings also suggest that highlighting the importance of AK to keeping forests standing cannot be restricted to selectively inserting AK in climate and/or development strategies which have been designed far from Indigenous territories—as Simpson (2004) or Nadasdy (2003) have argued—and without considering this integral character of Indigenous territories and knowledges. Further research should examine the drawbacks of scaling-up Indigenous struggles to the global scale. This because more analyses of the climate initiatives of historically marginalized groups are necessary to continue to comprehend the multiple and diverse links between knowledge and global climate politics.

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## 5. Research Article III:

### Co-producing Autonomy? Forest Monitoring Programs, Territorial Ontologies, and Indigenous Politics in Amazonia

#### Introduction

*“They (conservationists) are bringing these new technological tools to amaze Indigenous folks, like they did before with mirrors and chaquiras”*

*Humberto, COICA and Yucuna youth leader.<sup>36</sup>*

Amazonia is a critical region for climate change action and biodiversity conservation. As the largest rainforest in the world, it stores an important amount of the planet’s carbon stocks, while also accounting for around 27% of all emissions attributed to deforestation—an activity which produces 12–20% of global greenhouse gases (Hecht, 2011). With higher proportions of primary forest cover and carbon storage, as well as lower rates of deforestation, Indigenous territories—about a third of Amazonian lands—are gaining notoriety in that context (Nepstad et al, 2006; Lu et al, 2010; Ricketts et al, 2010; Blackman & Veit, 2018). Yet, Indigenous peoples and territories also face growing threats from the extractive activities and development models of the nine countries that share the Amazon Basin.<sup>37</sup> At least half of Indigenous territories are under pressure from mining, oil extraction,

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<sup>36</sup> Chaquiras are colorful and shiny beads. Humberto was referring to the history of how Spanish colonizers deceitfully traded these objects with Indigenous peoples, in exchange of valuable resources and even lands.

<sup>37</sup> I use the term “peoples” as most Indigenous leaders across Amazonia prefer this term when referring to their ethnicity and identity—other preferred terms include “nationalities.”. Terms like “tribes” can be considered inappropriate. “Peoples” can also encompass non-indigenous groups such as Black collectivities.



infrastructure, agricultural activity, or hydroelectric development, with a third of them being under “high” and “very high” pressure (RAISG, 2020).<sup>38</sup>

With this background, forest monitoring programs emerge as mechanisms to control and stop deforestation events—and thus are instruments of climate change mitigation—and as key spaces of collaboration between International environmental organizations (IENGOs) and Indigenous organizations in Amazonia. IENGOs propose these programs acknowledging not only Indigenous peoples’ role in keeping forests standing, but also the legitimacy these collaborations can give to their own actions. In turn, Indigenous organizations increasingly see climate change as a politically significant object, and climate initiatives as central to advance their longstanding political goals (see Article I). The premise of these programs is simple: through GPS, smartphones, drones, GIS, digital (cartesian) mapping, and other technologies—sometimes collectively labeled as “Smart Earth” technologies (Bakker and Ritts, 2017)—community members monitor their territories to document and report threats to organizations at different political scales. Such organizations develop systems to process and respond to the threats, which often also involve other elements for territorial governance.

In this paper, I analyze how these monitoring programs support (and/or hinder) the political goals of the Coordinator of Indigenous Organizations of the Amazon Basin (COICA)—a Pan-Amazonian organization—, its member organizations in Ecuador (CONFENIAE- Confederation of Indigenous Nationalities of the Ecuadorian Amazon) and Peru (AIDSESEP- Interethnic Association for the Development of the Peruvian Rainforest),

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<sup>38</sup> This analysis excludes pressures from timber concessions, coca and oil palm cultivation, and illegal activities. So, the impacts of extractive activities on Indigenous territories are much higher.

and the technical office the Amarakaeri Communal Reserve in Peru (henceforth ECA Amarakaeri). Rather than examining the implementation of each program, I analyze common themes that cut across them, and their implications for Indigenous politics.

Scholars in science and technology studies (STS) and digital geographies (DG) note that technologies and environmental relations and politics can shape one another in monitoring programs and digital spaces (Gabrys, 2016; Bakker and Ritts, 2017; McLean, 2020). They also argue that citizen science (or sensing) initiatives produce different types of environmental politics and citizenship, while also raising ethical questions (Gabrys, 2016: 17; Bakker and Ritts, 2017). Additionally, they have analyzed the historically exploitative relationships between technoscientific projects and Indigenous peoples, and the potential and shortcomings of digital tools for emancipatory goals (e.g., Hunt & Stevenson, 2017). However, this literature has yet to pay more attention to how forest monitoring programs and technologies articulate in the self-determined climate and territorial politics of Indigenous organizations. In the context of Amazonia, doing so requires engaging with contributions about ethno-territorial struggles and their ontological politics (e.g., De la Cadena, 2015; Escobar, 2015; Lopez-Sandoval et al, 2017).

Drawing from twelve months of fieldwork with the organizations at the center of this study, I argue that forest monitoring programs and technologies co-produce forms of climate and territorial politics in Amazonia. Through forest monitoring programs, Indigenous organizations imagine and enact territorial defense, or a politics founded on *integral territorial ontologies*. This is, a politics that conceives Indigenous territories as lifeworlds which encompass human and more-than-human beings, multiple relationships among them, as well as various political objectives including autonomy or self-determination (c.f., Article

I). But these programs can also reinforce a politics of open-access information, where territories are spaces with strict boundaries and exclusive rights—which can threaten Indigenous autonomy. Thus, in what follows, I inquire into both possibilities and the challenges that these programs represent for Indigenous politics and climate change action in Amazonia.

### **Cases and Methodology**

This research is part of a multi-sited and qualitative project about Amazonian Indigenous climate politics, involving various primary and secondary data sources. My methodology applies two approaches that have not been integrated: a political ecology of scale perspective, which sees scale as socially, politically, and biogeographically defined (Neumann, 2009); and Indigenous methodologies, which incorporate a decolonizing lens and center Indigenous voices and epistemologies through conversational and open-ended methods (Kovach, 2010; Smith, 2013).

In most countries of the Amazon basin (and in broad terms), political representatives or leaders are selected starting at the community level. Such communal leaders then select leaders for a sub-national organization—i.e., organizations at the state or provincial level, and/or organizations that belong to a peoples. Leaders from sub-national organizations subsequently choose national and then regional (COICA) leaders. In the case of the latter, the representatives of national organizations meet in a congress to select one leader from each Amazon Basin country, to make part of COICA’s Directive Council. Thus, I incorporate

scale as an Indigenous political practice—which also gives legitimacy to the representatives and organizations—rather than to reify static or hierarchical categories.<sup>39</sup>

In consequence, I analyze forest monitoring programs at three scales of Amazonian Indigenous politics. At the Pan-Amazonian scale is COICA’s Early Alert and Rapid Response System (henceforth SAT). Because SAT is at the proposal stage, COICA leaders imagine how it can support their political goals. SAT will be a system that gathers information about threats to the Indigenous territories across the nine countries and over 5000 communities in Amazonia—i.e., connecting to the systems of national organizations. Community members will monitor their territories to document and report threats such as invasions, illegal mining, illicit plantations and logging, corruption acts, deforestation, among others. Technical professionals will then identify what kind of response—legal, communicational, internal, etc.—is viable and appropriate. The World Wildlife Fund (WWF) is supporting COICA in building SAT.



**Figure 6:** Screenshot of AIDSESEP’s Geoserver.

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<sup>39</sup> Which scholars including Marston et al, 2005 view critically.

At the eco-national scale is AIDSESEP’s Early Alert and Action System, or Geoserver, built with the funding and technical support of German cooperation and other entities. This Geoserver includes two main components (Figure 6). First is a cadaster or registry of territorial claims and titling projects, which involves mapping and GIS. This tool incorporates a “communal territorial governance” category, which is a visual registry of communities’ territorial zoning (see more below). Second is an Early Alert System (Figure 7) with the subcategories: Early Alerts (i.e., of threats like illegal activities, corruption acts, deforestation), Forest Fires, Wildlife Trafficking, Health Alerts, and Defense of Defenders (i.e., human rights threats). COICA plans to draw from this Geoserver to build its SAT.



**Figure 7:** Screenshot of the Geoserver's early alert system’s categories.

Lastly, I draw from observations and testimonies about the “All Eyes on the Amazon” (TOA for its acronym in Spanish) program, coordinated by Hivos<sup>40</sup> and co-implemented by ECA Amaraeri—the sub-national scale—and by COICA and CONFENIAE in other

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<sup>40</sup> Hivos is a Dutch international organization.

Ecuadorian and Peruvian sites; with the support of other IENGOs like Greenpeace or Digital Democracy.<sup>41</sup> According to its website, TOA supports indigenous peoples “in their fight against deforestation and ecosystem degradation. It combines state-of-the-art technology, such as satellites, innovative apps and drones, to detect deforestation, degradation, and human rights violations, record them and eventually stop them” through “lobby and awareness campaigns, and law enforcement.”<sup>42</sup> Because TOA is ongoing in Ecuador and Peru, COICA, AIDSESEP and CONFENIAE are drawing lessons from it in building their own systems.

My fieldwork involved over 45 open-ended interviews, participant observation, and a review of secondary sources. Interview participants included Indigenous leaders/coordinators, Indigenous technical professionals (men, women, and youth), and mestizo technical professionals. Leaders were elected members of COICA’s Directive or Women’s Council—from the nine Amazonian countries—or of their respective organization. Technical professionals had been involved in the design and/or implementation of climate change and forest monitoring programs. Interviews inquired about Indigenous climate initiatives, politics, and knowledges in Amazonia, participant’s conceptions of forests and territories, how these aspects interconnect with monitoring technologies, etc.

I carried out participant observation while volunteering with COICA in its central office in Quito; in CONFENIAE’s political meetings and workshops; and in ECA Amarakaeri’s office. I also volunteered with the School of Political Training of the

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<sup>41</sup> Among other organizations and sites.

<sup>42</sup> See <https://alleyesontheamazon.org/>.

Organization of Indigenous Peoples of the Colombian Amazon (henceforth OPIAC School).

The collection and review of secondary sources included news releases, educational materials, planning documents and webinars authored by the organizations involved. For data analysis, I used mixed-methods approach that combines interpretative meaning-making and discourse and/or thematic analysis (Kovach, 2010). I thus used coding (manual and with Atlas TI software) to group findings and build themes according to my research questions and to other emerging themes across data sources. I further engage with the perspectives of many research participants to evidence an interpretative meaning-making process.

### **Literature Review: Forest Monitoring Programs, Technologies, and Politics**

Emerging scholarship in Science and Technology Studies (STS) and digital geographies discusses how forest and digital technologies can co-produce environmental relations and politics (e.g., Gabrys, 2016; McLean, 2020). This means that, in STS's idiom of co-production, they recognize that technology is embedded in "the social" (i.e., in social practices, identities, institutions), so it can at once be a product of (environmental) politics and constitutive of such politics (as in Jasanoff, 2004: 2). In studying forest and climate monitoring programs, Jennifer Gabrys has considered "the distinct ways in which environmentalist practices and politics concreate in and through computation technologies as they become environmental" (2016: 16). Similarly, by studying the digital engagements of environmental movements, Jessica McLean has argued that environmentalism is changing digital geographies, which in turn change people, the environment, and how we understand human–nature relations (2020: 11).

As discussed above, environmental concerns certainly motivate INGOs and Indigenous organizations to engage in forest monitoring programs and use technologies. However, as the literature also recognizes, there are different types of “environmentalisms” in Amazonia (Hecht, 2011). Even more, there are different political goals involved in climate politics in the region, which also reflect longstanding political conflicts around the territories (see Article I). These aspects have yet to be fully addressed in this literature, as are collaborative programs between IENGOs and Indigenous organizations. However, the literature has critically analyzed and offers lessons about programs that are akin to those analyzed here in different ways.

First, scholars have attended to the political implications of the monitoring, reporting, and verification (MRV) systems, that are part of the Reducing Emissions from Deforestation and Forest Degradation (REDD+) mechanism—the main climate mitigation mechanism to be implemented in tropical forests like Amazonia. Like TOA, REDD+’s MRV systems seek to address the global concern with the carbon stored in forests, and to monitor deforestation-related changes—even if their approaches are quite different. Moreover, ECA Amarakaeri often frames their participation in TOA as part of building an “Indigenous MRV,” and AIDSESEP sees its forest monitoring efforts as part of “holistic” climate initiatives such as Amazon Indigenous REDD+ (or RIA, see Article I). Concerning MRV systems, Gupta and colleagues have argued that while appearing to be technical and outside the domain of politics when “generating and analyzing data about forest carbon stock changes and flows, and cho(sing) and us(ing) techniques and methodologies of satellite imagery, remote sensing and/or ground-level verification” (p. 726), these systems exercise disciplinary power through standardization, simplification, and erasing the local (2012: 726). This echoes with broader



critiques of the processes of commodification, individuation, and privatization that REDD+ enforces (e.g., Osborne, 2015). Scholars argue that such processes are rooted in “fragmented” ontologies, which separate nature and society (Shankland and Hasenclever, 2011; Schroeder and Gonzalez, 2019), and thus render forests legible only through their carbon content, while erasing other forest-related values and their embeddedness in society (e.g., Osborne, 2015; McDermott et al, 2011).

Second, citizen science (or sensing) initiatives are also like the programs analyzed here, as they involve human users to monitor environments and collect data with several—usually lower cost—technologies (Gabrys, 2016; Bakker and Ritts, 2017). These initiatives can give place to new configurations of citizen engagement, such as a sense of increased responsibility, while making “particular environments and environmental concerns matter” (Gabrys, 2016: 273). In the programs analyzed here, the central environmental concerns are deforestation and forest degradation, demonstrating how “climate change (has) become a recurring factor that in-forms how and why environmental monitoring takes place and the environmental data that might be generated” (Gabrys, 2016: 112).

Conversely, citizen science initiatives raise important ethical questions, which are applicable to these programs. For instance, in addition to community members rarely being compensated, there is the question of who selects variables to measure and for whom they are selected (Bakker and Ritts, 2017: 205). As I discuss below, while there is a tacit assumption between IENGOs and Indigenous organizations that they want to monitor the same things, this is not always the case—they not only have different political interests, but also different conceptions of what nature is and so of what elements in nature are worthy of monitoring.

Furthermore, “Smart Earth” and citizen science initiatives can present certain challenges. The abundance of data, which COICA and AIDSESEP will face with a fully operating SAT and Geoserver is one. COICA plans to manage the information that nine national organizations and 5000 communities produce, and AIDSESEP that which nine regional organizations (i.e., subnational from the Peruvian Amazon), 109 federations and 1809 communities produce. Scholars have noted that the abundance of data does not necessarily translate into a more efficient or transparent governance (Bakker and Ritts, 2017: 12). In addition, in the case of these initiatives, handling that much data represents a challenge that may require permanent and constant financial and technical support from IENGOS.

But perhaps more important is open-access data. For some scholars and proponents of technological projects, open-source, “ubiquitously available” data is fundamental to “ensure the local determination of environmental decision-making at a time of planetary-scale organization... (and even as) an ‘essential component of democracy’” (Bakker and Ritts, 2017: 206). Yet, Bakker and Ritts (2017) note that open-source data raises questions of who will set quality controls, and whose interests the data will serve.

Relatedly, an aspect that the literature about “Smart Earth” technologies has largely missed is whether and how open-access data can represent a threat for Indigenous politics. While referring to other types of information, the Global Indigenous Data Alliance has argued that data sovereignty should include designing rules for the restriction and opening of data. This because open data “could be used to inform development... set a future vision (and) influence wider public opinion...” yet, simultaneously, “opening up data may be accompanied by concern about protecting Indigenous cultural information, rights, and

intellectual property” (Kukutai and Taylor, 2016: 132). Scholars have addressed the latter concerns in issues including bioprospecting (e.g., Foster, 2016) or Indigenous “ecological” knowledge more broadly (e.g., Simpson, 2004). Here, I start to address the implications to Indigenous politics of the “coloniality of openness” (Graddy-Lovelace & Limeberry, 2021) within forest monitoring programs.

Such concerns relate to broader discussions in postcolonial STS and media studies, which have critically analyzed the role of technology in colonial projects (Subramaniam, et al, 2017), or the coloniality of power in data assemblages which can impose ways of being and deny “the existence of alternative worlds and epistemologies” (Ricaurte, 2019: 350). Yet, scholars also argue that it is possible to “reverse extractive technologies and dominant data epistemologies in favor of social justice... and the rights of nature” (Ricaurte, 2019: 361), as digital spaces can be “new avenues for Indigenous peoples’ resistance to colonial hegemonies and possibilities for community building” (McLean, 2020: 14). Digital (counter)mapping, for instance, may re-purpose “novel technologies that are used to deny Indigenous presence and consume place for... capital accumulation” (Hunt & Stevenson, 2017: 378)—e.g., by restoring Anishinaabemowin place names. As such, it has the potential to challenge how the territory is conceptualized, while simultaneously reproducing “power and history, language, and control” (p. 386).

Forest monitoring programs represent opportunities and challenges for Indigenous organizations as well. But beyond that, as these programs are geographically situated in Amazonia, I want to suggest that they co-produce forms of territorial and ontological politics. Elsewhere, I have argued that analyses of climate initiatives and politics in Amazonia must address territorial politics (Article I), as struggles over the physical territories, but also over

decision-making and territorialities—i.e., the symbolic and material meanings of space—have been at the center of conflicts in the region (Baletti, 2012; Hecht and Cockburn, 2010; Lopez-Sandoval et al, 2017; Vela-Almeida et al, 2020). Additionally, because these programs engage with Indigenous politics, it is necessary to center *ontological politics*. This allows for a more textured analysis of ethno-territorial struggles and of how natural and supernatural beings participate in politics—i.e., disrupting the ontological division between nature and humanity (Whatmore, 2002; De la Cadena, 2015; Escobar, 2015).

Discussions about ontologies and more-than-human beings have not been absent from the literature about digital geographies and “Smart Earth” technologies. Authors Jessica McLean (2020) and Jennifer Gabrys (2016) discuss how technology can re-shape environmental relationality and how more-than-human beings participate in new forms of politics—or in “cosmopolitics” (Gabrys, 2016: 33, drawing from Stengers, 2005). However, in the cases analyzed here, technologies also articulate with longstanding forms of politics, which not only involve more-than-human beings but “worlds with a dense network of materiality and interrelations between humans and natural and supernatural beings” (Escobar, 2015: 29; Blaser, 2016).

More specifically, for Indigenous leaders, technologies (can) become helpful tools in territorial defense and their goals of autonomy and self-determination. I have argued that Amazonian Indigenous climate initiatives, as part of territorial defense, are founded on what I call “*integral territorial ontologies*, this is, on common conceptions of territories as indivisible entities or lifeworlds that encompass multiple relationships not only between humans and nature, but also among more-than-human beings” (Article I). As such, territorial defense and climate politics in Amazonia cannot be separated from concerns such as human

rights, autonomy and self-determination, and resistance against extractivism (Cifuentes, 2020; Article I). In the following section, I illustrate how beyond environmental politics, forest monitoring programs can co-produce territorial and ontological politics in Amazonia.

## **Findings**

### ***Articulating Territorial Ontologies and Politics in Forest Monitoring Programs***

*“SAT COICA is about having our own systems to defend the territories. A system that we create ourselves, not the Ministry of Environment or the governments.”*

*“(The purposes of) these initiatives are to govern our territories... to know what we have, what is threatening us, and what are the alternatives... information is a powerful tool.”*

Those are the words of COICA’s coordinator, Gregorio Díaz Mirabal (Curripaco, Venezuelan), and vice-coordinator, Tuntiak Katán (Shuar, Ecuadorian), respectively (personal observation, April 2019).<sup>43</sup> They illustrate the main reasons why many leaders across Amazonia are interested in developing forest monitoring programs. For them, these programs are part of a continuous search for strategies and new tools to strengthen Indigenous autonomy and territorial defense. In this case, Indigenous organizations can become more autonomous by using and controlling data about Indigenous territories. Moreover, these systems can contribute to their efforts to attain more territorial security

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<sup>43</sup> I use the full names of COICA’s Coordinator and Vice-coordinator as they are now very public figures who make similar statements in public documents, webinars, and other instances. However, I use only a protected first name for all other leaders and technical professionals to protect their identities and due to IRB protocols.

across Amazonia—e.g., by processing territorial claims and identifying where communities need support—at a time when there are multiple threats to Indigenous lives and territories.

Apart from their technical use, monitoring programs and their technologies represent a possibility to strengthen political leadership. For the organizations involved, Indigenous leaders and community members can become more “empowered” by learning about what threatens their territories, and how to use new technologies. But this is not limited to gaining new skills and formal education. Instead, many research participants noted that these programs can help in creating “better leaders,” by strengthening their roles at all political scales. For COICA leaders and Oscar—an Awajún and AIDSESEP technical professional—the programs can give a “long-term vision” to community leaders and monitors. That is, they can build capacities and connect leaders across the Peruvian Amazon in a united purpose—which can help them face, for instance, the deceiving offers of oil, logging, and mining companies that intend to “buy leaders” (personal communication, October 2019).<sup>44</sup>

Leaders further note that technologies can be tools for advocacy, allowing them to present evidence and give visibility to the problems that Amazonian Indigenous territories face. But leaders and technical professionals imagine other uses, and repurpose these technologies, in ways that connect them more deeply with territorial defense and integral territorial ontologies. Mark (a Guyanese and Patamona) COICA leader, explains that GIS software is a critical tool to create a visual representation of Indigenous cosmovisions, and of elders’ knowledges about, for example, where sacred places are located. In his words, this

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<sup>44</sup> That is, to give leaders money or other benefits so leaders either convince community members to accept extractive projects, or to accept such projects on behalf of the community without a proper process of prior consultation and consent.

tool “can help elders to make their oral history, their ancestral knowledge come alive... to bring to life what has existed for years. Yes (this knowledge) is alive in the oral traditions, but it’s not alive in a physical way so others can appreciate it.” For him, through technological tools, (non-Indigenous) outsiders can see things that only Indigenous persons were able to see, or places that only community members knew about. They can thus present information in a format that “policy makers can actually understand” (personal communication, April 2019). So, like Mario—a COICA and TOA Shuar technical professional—also notes, they can become key for Indigenous organizations’ evidence-based advocacy campaigns which aim to change public policies that affect their territories (Mastracci, 2020).

Furthermore, Amazonian Indigenous organizations at different scales emphasize that these programs can—and even must—incorporate ancestral knowledges (AK) and practices in their design.<sup>45</sup> In a way, technologies allow organizations and communities—and Indigeneity—to become legible. For instance, Oscar explained how ancestral knowledges inform communities’ territorial zoning:

“We can provide technical support, but (we do) this work, like mapping, ... by applying Indigenous ancestral knowledges. If a community has always harvested fruits or has hunted certain animals... (and) they explain that: ‘our grandparents (and) we have always hunted in that zone... Because a certain plant is there and that animal eats it, or... (a certain) animal drinks water there. So... we have always cared for that water, for those plants and we do not knock them down because if we do, that animal will not come back.’ That is ancestral knowledge. So, we delimit that as a hunting area. We also define where chacras<sup>46</sup> or fishing areas are... (Similarly, community

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<sup>45</sup> AK are passed from generation to generation and are part of different areas of life including medicine, nourishment, and forest vitality.

<sup>46</sup> Chacras are Indigenous agricultural parcels/systems in Ecuador and Peru. There are similar terms in other countries, like chagra in Colombia. Leaders note that there are similar systems

members say) ‘our gods and spiritual guides live here, or tell us not to hunt there’ so, we establish those as conservation areas... this way, we articulate ancestral knowledges with current affairs, with science, while applying technology.” (Personal communication, October 2019).

Likewise, even though for Walter, the Harakbut leader of ECA Amaraeri, using cutting-edge technologies is a big change for the communities in Amaraeri, monitoring is not new since

“Vigilance... has always been an ancestral practice in communal territories... (that are) part of the ancestral territory of the Harakbut peoples... (in our) commitment to protect our own territories... However, if we previously needed to travel for a long time, now I can use a drone and avoid walking too much or altering the ecosystem.” (Hivos, 2020).

Other AIDSESEP and COICA leaders similarly mentioned that for Indigenous peoples, territorial monitoring and vigilance has been a constant in their lives and that of their ancestors. Therefore, Oscar explained that when AIDSESEP proposes these programs, community leaders argue that “Indigenous vigilance and monitoring have always existed, (they) have always been vigilant of their territories, of their forests... but (they) have never put that in writing” (Personal communication, October 2019).

Consequently, for Indigenous leaders and technical professionals, “Smart Earth” technologies allow Indigenous communities and organizations to “write down,” “make visible,” or materialize conceptions of the territory, cosmovisions, and ancestral knowledges and practices. As such, Indigenous organizations repurpose forest monitoring technologies to incorporate the agency of natural—e.g., plants and animals—and supernatural—e.g., gods

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(in form and symbolism) across Amazonian cultures, even though they acquire different names in different languages.



and spiritual guides—beings, and to give evidence of the territorial relationships among these and human beings. This is demonstrated in Oscar’s view, according to which the centrality of these agencies and relationships in Indigenous communities’ territorial planning can become manifest through digital cartesian mapping. Furthermore, as my interviews also demonstrated, for COICA leaders like Robert (a Colombian Inga leader), ancestral knowledges and practices are often conceived as “subsystems” of the “integrated, complex systems” that are the territories (personal communication, July 2019). As such, they are inseparable and central to territorial defense. Thus, for some leaders, forest monitoring programs and technologies can not only support the maintenance and renewal of ancestral knowledges and practices, but they can also give visibility to their relationships with the territories.

This demonstrates how through forest monitoring programs, Indigenous organizations imagine and enact territorial defense, or a politics founded on integral territorial ontologies. But territorial ontologies can also exceed these programs’ possibilities (c.f., De la Cadena, 2015) and the programs can co-produce other types of politics, as the following section shows.

### ***Forest Monitoring Programs and the Politics they Co-produce.***

Indigenous communities in Yaguas, Peru—one of COICA’s TOA implementation sites—wanted to document and report illegal fishing in a river nearby, by using drones. The communities observed that outsiders were taking fish without authorization, from a place that has also become an entryway for invasions. Pamela, a COICA technical professional, explained this to Camila, TOA’s program coordinator (from the IENGO side). However, Camila argued that the communities should not do that, as the drones are not meant to

monitor the river, just the forest. Pamela and I were surprised by how the coordinator viewed the river and the forest as separate entities (personal observation, January 2019). This contrasted with what we had learned from COICA leaders, who emphasized on creating climate initiatives that viewed, and proposed to govern, the territories holistically—that is, as containing forests and rivers among many other elements.

Camila’s view reflected an ontological separation the elements of the territory, but it also directly responded to IENGOS’ central objects of concern: deforestation and forest degradation as the drivers of climate change. As such, IENGOS focus on forests, and their value as carbon sinks. These organizations often assume that the concerns of Indigenous organizations are similar (c.f., Baletti, 2012) as TOA’s website illustrates when mentioning that the program supports them “in their fight against deforestation and ecosystem degradation” (Hivos and Greenpeace, n.d.). However, Indigenous organizations more often frame their territorial defense as a struggle against extractivism in general, which sometimes aligns with the (official) drivers of deforestation, but not always. So, this anecdote illustrates how monitoring programs not only raise questions of “who selects variables to measure and for whom” (Bakker and Ritts, 2017: 205), but also co-produce different ontological and territorial politics.

Other aspects of the programs also demonstrate this. For instance, while for technical professionals like Mark it is beneficial to locate places such as sacred ones in digital maps, Humberto was rather wary of that. For him, Indigenous communities should not give the information about the location of places of spiritual information to those “who are not interested” on protecting them. In his view, IENGOS or other external actors “could use that information to say that one place or another does not belong to an Indigenous community if

that place has not been registered in the path of the people who are monitoring or walking with a GPS” (personal observation, June 2019). He was concerned that the information that was uploaded to the different platforms could be used for delimiting the territories in certain ways, and perhaps even restrict communities’ access to places which are not in what is legally recognized as their territory.

Moreover, locating sacred places as points in a map to make them legible can erase some of their symbolism and embeddedness in a territory. As the manuals of the OPIAC School (2018; 2019) explain, in many Amazonian cultures, territories have different dimensions and there are different understandings of where they are located. There is a “territory of ancestral origin,” which marks a place of spiritual power and is where “the life and essence of each peoples emerge, obeying to the order and mandate of the beings of creation.” There is also the traditional territory, where a peoples “has settled and develops its social, cultural and spiritual practices,” and which may or may not be close or adjacent to the territory of origin. Third is the territory of thought, which is intangible and goes beyond the origin and traditional territories, incorporating “physical and spiritual worlds” (OPIAC, 2019).

These different dimensions and conceptions of the territories cannot be incorporated in what “Smart Earth” technologies can map or monitor. They thus exceed the possibilities (c.f., De la Cadena, 2015) of these technologies. Because of their technical characteristics, monitoring programs and technologies can enforce a view of territories (only) as physical places with strict boundaries, which monitors need to control as if they were the communities’ private property. For instance, in AIDSESEP’s launching of the Geoserver, leaders expressed an interest in partnering with Peru’s armed forces to keep threatening

people outside the limits of communities' territories. But while the purpose of such boundaries is often to protect communities from those who threaten their lives and livelihoods, strict boundaries can also locate places such as those of spiritual power outside them, enforcing the idea that they no longer “belong” to an Indigenous community.

Furthermore, IENGOS also promote open-access data as something inherently positive, which allows people located anywhere in the world to, for instance, track changes occurring in the forest (e.g., Hivos, 2020). Some IENGOS encourage communities to upload the information about threats or the location of chacras or sacred places to platforms such as Google Earth. A program akin to those analyzed here, Amazonia 2.0, does this for the traceability of the cacao that Indigenous chocolate enterprises use. But this “openness” can also represent risks and challenges for Indigenous communities and organizations.

For Humberto, because of the historical legacies of conflict in countries like Colombia, it would be extremely dangerous for external parties, even the government, to know where everything is. What is more, he noted that IENGOS have kept control of information systems—i.e., the passwords, the know-how to use and update the systems, among other aspects—that they have built collaboratively with Indigenous organizations—and which now include sensitive information related to the knowledges of several Indigenous peoples. These IENGOS, I learned, had committed to train Indigenous technical professionals in using the knowledge system, so they could transfer them after a three-year period. However, that time had passed, and they had not fulfilled their agreement. Humberto said there are plenty of Indigenous individuals who are now formally trained in managing information systems, yet IENGOS want to maintain the dependency that Indigenous organizations currently have, to be able to use them (personal observation, June 2019). As

mentioned above, the abundance of information that SAT or the Geoserver can generate may similarly create a dependency for Indigenous organizations on IENGOs, as managing it may require continuous technical and financial support.

At the same time, the leaders of ECA Amarakaeri discuss linking their information system to that of the government, as the latter wants to have a single information system about the alerts and threats happening in protected areas—which include communal reserves in the case of Peru. The realities and relationships between governments and Indigenous organizations vary from country to country, and that may shape programs differently—e.g., communities participating in TOA have used monitoring information in litigations against the state. But incorporating a high number of communities in national or Pan-Amazonian systems will present the challenge of respecting each of their autonomous processes and decisions to make information public or not. Since programs like TOA thus far include only the information of a few communities, with the intermediation of, for instance, subnational organizations such as ECA Amarakaeri—which represents only ten communities, whose leaders meet to make decisions about participating in the program or how to ensure the autonomy of communities—it is still difficult to know how exactly those aspects will be “scaled-up” to national and Pan-Amazonian systems.

Besides, as many research participants noted, the alerts that forest monitoring programs generate and locate—through technologies such as drones and GPS—are not always external (i.e., from actors that are not part of the community). There can be internal conflicts, or community members can undertake activities such as clearing or burning a space to cultivate a chacra, which under certain legal frameworks, and in certain places (e.g.,

communal reserves like Amarakaeri) would represent “environmental crimes.”<sup>47</sup> As Oscar explains, community members engage in this type of activity because they need to secure their livelihoods, or simply because they are sometimes unaware of the consequences. But, in that scenario, it can be dangerous to Indigenous communities and organizations to not have complete control—e.g., through complete, and exclusive access— of the monitoring information as external parties (e.g., armed forces) could act on those alerts first. Thus, Indigenous technical professionals emphasize on the importance of controlling the information and responding to it autonomously—also because each community has its own internal laws or regulations. So, for Oscar, communities and organizations should be able to intervene according to their own “Indigenous government”:

“In the framework of our autonomy, we would want to sanction the brother who has committed the offense first... we would want to do capacity building and to recuperate degraded areas before those instances get to an authority... because an environmental crime is punished by law here in Peru... [even if selling the trees that they have logged] has supplied for the entire population” (personal communication, October 2019).

Thus, monitoring programs can co-produce ideas and politics—that involve surveillance and the ownership and access to information—which, if not handled properly, can also risk Indigenous autonomy rather than enhance it.

## **Conclusion**

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<sup>47</sup> While conservation programs have often demonized traditional agricultural practices such as chacras, studies have found that these can be more sustainable than industrial practices (e.g., Mathews, 2011).

This paper has discussed how for Indigenous organizations across Amazonia, forest monitoring programs and technologies—which they implement in collaboration with IENGOS—can become powerful tools in their goals of autonomy and territorial defense. These programs can help identify the problems and threats—e.g., extractive activities, deforestation, or human rights violations—that Indigenous communities across the Amazon Basin are facing, and to facilitate responses to them, while uniting leaders across political scales, most notably the communal.

Moreover, for Indigenous leaders, technologies can allow Indigenous communities and organizations to “make visible” or materialize cosmovisions or ancestral knowledges and practices. Thus, I have argued that through forest monitoring programs, Indigenous organizations imagine and enact territorial defense, or co-produce politics founded on *integral territorial ontologies*. This is, they repurpose (or seek to repurpose) forest monitoring technologies to incorporate the agency of natural and supernatural beings, and to give evidence of the territorial relationships among human and more-than-human beings that are at the basis of territorial planning and defense.

However, forest monitoring programs and technologies also present important limitations for the political purposes of Indigenous organizations. They co-produce territorial and ontological politics which foster open access information and enforce conceptions of the territories as spaces with strict boundaries and exclusive rights—which some leaders now endorse as well. Further, Indigenous organizations such as COICA and AIDSESEP plan to manage their own systems without relying on IENGOS, but the programs themselves present some built-in challenges that may not allow them to do so—e.g., the need to handle an abundance of information. If it is not possible for these organizations to hold control of the

information, and if programs are not managed carefully—i.e., in a way that restricts information to parties with interests that are different or even opposed to those of Indigenous communities and organizations—these programs can instead threaten Indigenous autonomy. That is, they can limit the decision-making ability of communities and organizations, and perhaps even restrict the access of Indigenous communities to their livelihoods and—leaders fear—to certain places that are important to their peoples.

IENGOS are increasingly changing their discourse, to one about contributing to Indigenous territorial defense rather than just conservation or climate change goals (e.g., Hivos, 2020). But they may be thinking about territorial defense only in terms of defending land or the physical territories, rather than the territories as lifeworlds. Thus, they must remain attentive to their role within the overarching goals of Indigenous organizations and communities—and reflect on whether programs can also hinder those goals. Moreover, IENGOS should reflect on their own definitions of environmental problems and the ways they seek to address them (e.g., as in Jasanoff & Martello, 2004). These may or may not align to how Indigenous organizations and communities define the challenges they face and how they want to address them. This as some solutions that may appear common sense to IENGOS, as discussed above, may even be problematic.

Further, some Indigenous leaders and technical professionals are well aware of the challenges that forest monitoring programs and technologies present. Leaders at all political scales who are actively seeking (anti-colonial) ways to renew and advocate for ancestral knowledges and practices also know about the advantages and disadvantages of different mechanisms to do so. But, as research participants have noted, in a context of colonial institutions eroding Indigenous knowledges, and of elders being wary of transmitting their



knowledges, technologies are not a “silver bullet” to achieve those goals either. They may in fact standardize, simplify, and erase (as in Gupta et al, 2012, see above) some specific territorial and cultural characteristics of the communities that participate in these programs.

This study has thus begun to shed light into the possibilities and challenges of forest monitoring programs and technologies, within the interlinked struggles of climate change and territorial defense in Amazonia. Future work should analyze how the issues at the center of this study shape the implementation of each of these programs on the ground, or what are the implications of IENGOS’ aim of turning community members into “environmental police” (e.g., Hivos, 2020). But, as I have demonstrated, to understand how (new) technologies and society shape each other, as well as the many implications of climate change responses to justice issues, it is necessary to attend to the politics of the defense of life—and the many worlds and living beings that they involve.

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## 6. Conclusion

### Understanding Climate Politics as Territorial Defense

*“This is what we want to position at COICA: that the local, national and international should not be disconnected... At the international [scale, we want to] position territorial themes, with RIA and climate change initiatives... we must think about how we do that [climate change action] from the territory.”*

*Gregorio Díaz Mirabal, Venezuelan Curripaco leader and COICA’s General Coordinator. (Personal communication, April 2019).*

Gregorio’s quote above encapsulates some of the themes that cut across this study, most notably the integration territorial politics into climate change action at different political scales. For him, the Coordinator of Indigenous Organizations of the Amazon Basin (COICA), because of its Pan-Amazonian character, has often been too oriented towards the international scene. The agenda of COICA leaders is usually filled with international events: they attend Conferences of the Parties (COPs) of United Nations climate change or biodiversity framework conventions, planning meetings with international organizations in New York or Jakarta, and even “Amazonian Synods” in the Vatican. This is because international environmental organizations and donors offer more financial support for COICA to be part of such international events.<sup>48</sup> They are also more likely to fund programs

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<sup>48</sup> This has been the case throughout COICA’s thirty-seven years of existence. In my time working with COICA, I realized that NGOs and other donors invite COICA leaders to their meetings, in part because including them can give legitimacy to their actions in Amazonia. This search for legitimacy by inviting them can also be related to some recent scandals of NGOs violating the rights of Indigenous peoples for conservation goals (e.g., Warren & Baker, 2019), and the now well-known history of the links among the emergence of the

that focus on addressing climate change or integrating cutting-edge technologies to monitor Amazonian forests. COICA relies on international funding for even its basic operations—e.g., as leaders need to travel from different parts of the Amazon Basin to work in Quito—so this support is important for COICA and other Amazonian Indigenous organizations. However, for Gregorio, the “defense of the territory, the struggle against illegal mining and in favor of titling Indigenous territories” and responding to “las bases” (i.e., the grassroots, as in organizations and communities) is the priority—as is the case for many leaders (personal communication, April 2019).

Territorial defense is a central goal for COICA and other Amazonian Indigenous organizations with whom I collaborated for this research. COICA orients its actions towards “the promotion, protection, and security of Indigenous peoples and territories” in the framework of a “defense of life and Amazonia” (COICA, n.d.). The mission of the Interethnic Association for the Development of the Peruvian Rainforest (AIDSESEP) similarly involves “vindicating the territorial integrity of Indigenous peoples in Amazonia” while

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environmental movement, the appropriation of Native lands, and racist ideologies (e.g., Kosek, 2006; Taylor, 2016). Additionally, most NGOs prefer to work in initiatives that are not confrontational towards the governments. For instance, an NGO representative wanted the forest monitoring program that she coordinated to stay out of a dispute between the communities that participate in the program in Yaguas, Peru, and the Peruvian government, which had recently added Indigenous lands to Yaguas National Park. NGOs generally prefer not to engage directly in legal action for the recognition of Indigenous lands. I also evidenced how Indigenous organizations like CONFENIAE often have trouble finding funding for activities such as general assemblies that gather all their members, as NGOs prefer to finance and implement actions with concrete, quantifiable outcomes. There are some notable exceptions such as Amazon Frontlines, a US-founded (and funded) NGO that has supported Indigenous organizations in their legal actions against the Ecuadorian state to keep oil extraction out of their territories. My future work will analyze the relationships—and complications—of the work between NGOs and Amazonian Indigenous organizations in more detail. The scope of this work and the doctoral timeline did not allow for that to be included in one of these articles.

strengthening Indigenous self-governance and an Indigenous economy (AIDSESEP, 2021). Likewise, the Organization of Indigenous Peoples of the Colombian Amazon (OPIAC) centers the struggles for the survival and ancestral territories of Indigenous peoples, as well as Indigenous peoples' "own ancestral dynamics for the defense of the territories [and] autonomy..." (OPIAC, 2019).

Thus, the challenge that Amazonian Indigenous Organizations often face is to integrate the territory, its defense, and the concerns of communities and organizations at various political scales (i.e., the national, subnational, communal) into programs that address global concerns such as climate change or biodiversity. As the cases that I analyze in this dissertation demonstrate, climate change has thus become a politically significant object for Amazonian Indigenous organizations, in part because of an emerging international interest and willingness to addressing the phenomenon. The importance of Amazonia for climate change mitigation, due to its role as a large carbon sink—and the capacity of Indigenous territories to maintain that role despite the vast deforestation in the region—is further driving international environmental organizations (IENGOs) to seek collaborations with Indigenous organizations for climate change action. This interest adds up to the fact that Amazonia had already been at the center of conservation initiatives for many decades, for being the largest rainforest in the world.

Yet, Indigenous peoples and organizations that are now involved in climate change initiatives are not merely recipients of financial aid, nor do they give blanket endorsements to international climate mechanisms that are set to be implemented in tropical forests like Amazonia, such as Reducing Emissions from Deforestation and Forest Degradation (REDD+). Instead, in Gregorio's words, "COICA is the only Indigenous organization



worldwide that has said ‘how do we make [the international community] understand that we are important to conserve the forest, the planet... that this is not going to work without us... that, in the topic of the climate, it is us who can give the answer’ (personal communication, April 2019). Therefore, COICA, and the other Indigenous organizations with whom I collaborated for this research, want to create, and lead, climate change initiatives in their own terms—and in support of their own, broader political purposes. That is, they seek to place Indigenous territories, politics, cosmovisions and ancestral knowledges at the forefront of global climate change action.

But even though Amazonia—and particularly its Indigenous territories—is such a fundamental region for climate change mitigation and avoiding deforestation, critical literature about global climate governance has paid little attention to Indigenous initiatives and to its politics of territory. In Amazonia, territorial struggles have historically been at the center of political conflicts. These are over physical territories, but also over decision-making and territorialities—i.e., the symbolic and material meanings of space (Hecht & Cockburn, 2010; Baletti, 2012; Lopez-Sandoval et al., 2017; Vela-Almeida et al., 2020). These conflicts and the meanings that, for instance, governments and international organizations give to the territories affect how they design and implement climate mitigation mechanisms. I have discussed how, for Amazonian Indigenous Organizations, territories not only have a different meaning but also involve different lifeworlds and lifeways (c.f., Article I).

Relatedly, Latin American scholars have further proposed the concept of ontological politics as central to analyzing ethno-territorial struggles, more sustainable designs of life, and how natural and supernatural beings participate in politics (Blaser, 2014; De la Cadena, 2015; Escobar, 2015)—but they have not engaged with global or climate politics. Therefore,

I have studied the ontological politics of Indigenous climate initiatives in Amazonia to facilitate a recognition of how global climate politics can also articulate diverse lifeways and ways of understanding and relating with the world—or with a plurality of worlds, in this case, with Amazonian territories. This also sheds light into the possibilities of alternative and more just responses to the global phenomenon of climate change in Amazonia, beyond the neoliberal climate regime.

In that regard, my principal argument in this dissertation is that Amazonian Indigenous climate initiatives are founded on what I call *integral territorial ontologies*. In these ontologies, territories are indivisible entities or lifeworlds that contain forests (or trees), biodiversity (i.e., animals/plants), humans, sacred sites, water, underground resources (e.g., oil), supernatural beings, and other elements. They further encompass multiple relationships not only between humans and other living beings, but also among more-than-human beings. This concept goes beyond that of relational ontologies (e.g., De la Cadena, 2015; Escobar 2015) to not only account for an ontological integration of humans and nature, but also for the wholeness of territories as lifeworlds that ensure Indigenous peoples' survival. I therefore find that these ontologies shape the design and implementation of the different climate initiatives that I have analyzed here: the Amazon Indigenous Initiative to Reduce Emissions from Deforestation (RIA), OPIAC's School of Political Training (the OPIAC School) and forest monitoring programs including COICA's Early Alert and Rapid Response System (SAT) and AIDSESEP's Geoserver. As I detail below, these territorial ontologies and their politics also mean that climate politics in Amazonia become inseparable from territorial defense.

## **Integral Territorial Ontologies and Indigenous Climate Initiatives in Amazonia**

Integral territorial ontologies intervene in climate initiatives in several ways, as I demonstrate in the articles that make part of this dissertation. The first of these initiatives, RIA, seeks to mitigate climate change by keeping forests standing in Indigenous territories—based on the finding that these territories have large proportions of primary forests and low rates of deforestation. With RIA, COICA sought to design a mitigation initiative that could resonate with Indigenous communities, peoples, and organizations across Amazonia, despite their cultural differences. Thus, within RIA, integral territorial ontologies are fundamental in explanations of forest/territorial vitality and territorial ordering in Indigenous Amazonia. That is, territorial relations among humans and more-than-human beings are (part of) what keeps forests standing in Indigenous territories.

Additionally, in RIA, these ontologies inform an approach that does not separate forests—and carbon—from the territories as the spaces that secure Indigenous peoples' lives, livelihoods, and lifeways. As such, RIA's conceptualization challenges the processes of fragmentation, individuation, and (economic) valuation that are part of REDD+ and that facilitate the commodification of nature. Additionally, and in contrast with mainstream climate and neoliberal governance, RIA embraces—instead of silencing—territorial struggles such as those against extractivism. Further, because ancestral knowledges (AK) are also inseparable of the territories, I find that RIA “scales-up” AK and articulates them at the regional (or Amazonia-wide) scale of Indigenous political organization, while maintaining their place-based dimension and connection to territorial defense.

That is also the case with the second initiative that I study, the OPIAC School of Political Training. I show how this initiative—also framed as a climate initiative to

international donors— scales-up AK to a national scale of political organization by finding commonalities across knowledges that are relevant for Indigenous physical survival, and their survival as peoples. This exercise is part of the culturally aware training that the school gives to young Indigenous leaders from across the Colombian Amazon, so they, and their organizations, have more tools for their “defense of life, autonomy and territories” (OPIAC, n.d.). A central objective of the school is thus to strengthen Indigenous epistemologies in view of colonizing education processes, while promoting a sense of belonging and recovering knowledge systems that are “*proprios*” to Amazonia—i.e., that are characteristic or unique to the region’s peoples (OPIAC, n.d.).<sup>49</sup>

Moreover, the OPIAC School incorporates integral territorial ontologies in suggesting that AK is central to how the territories are ordered in Amazonia—according to Indigenous thought. For instance, its educational materials mention that “the territory is a daily practice and a means to transmit knowledges, a world where (people) teach how to share life with others, and not simply a politically and culturally delimited space” (OPIAC, 2019). Therefore, the School further demonstrates that the AK that keep forests standing cannot be selectively inserted in climate and/or development strategies which have been designed far from Indigenous territories (as Simpson, 2004 also suggests) because of this integral character of Indigenous territories and knowledges, and their inseparability.

Lastly, I have studied forest monitoring programs, which emerge as mechanisms to control and stop deforestation events—and are thus instruments of climate change mitigation. These are also key spaces of collaboration between IENGOS and Indigenous organizations in

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<sup>49</sup> I use the word in Spanish as there is no direct translation.

Amazonia. I focused particularly on COICA's SAT and AIDSESEP's Geoserver. Through GPS, smartphones, drones, GIS, digital (cartesian) mapping, and other technologies—sometimes collectively labeled as “Smart Earth” technologies (Bakker and Ritts, 2017)—these programs help community members to monitor and identify the problems and threats—e.g., extractive activities, deforestation, or human rights violations—that Indigenous territories are facing. Monitors then document and report these threats to organizations at different political scales. Such organizations, in turn, develop systems to process and respond to the threats, which often also involve other elements for territorial governance.

I have argued that through forest monitoring programs, Indigenous organizations imagine and enact territorial defense, or co-produce a politics founded on integral territorial ontologies. This is, they repurpose forest monitoring technologies to incorporate the agency of natural and supernatural beings, and to give evidence of the territorial relationships among human and more-than-human beings that are at the basis of territorial planning and defense. Moreover, for Indigenous leaders and technical professionals, technologies can allow Indigenous communities to “make visible” or materialize cosmovisions or ancestral knowledges and practices. Therefore, these programs become important for political objectives including autonomy or self-determination, which are inseparable from territorial defense. Yet, the programs can also present limitations to attaining those objectives. For instance, the different dimensions of territories as lifeworlds, such as their characteristics as “physical and spiritual worlds” (OPIAC, 2019) cannot be incorporated in what “Smart Earth” technologies can map or monitor. Integral territorial ontologies thus exceed the possibilities (c.f., De la Cadena, 2015) of these technologies. Furthermore, the programs simultaneously co-produce (territorial and ontological) politics which foster open access information and

enforce conceptions of the territories as spaces with strict boundaries and exclusive rights—which can threaten Indigenous autonomy.

### **Global Climate Politics and Knowledges in Amazonia**

For Gregorio, Indigenous organizations and IENGOS—and other institutions that are part of the “liberal international green regime” (Peet et al., 2010: 10)—represent “two positions that have a hard time understanding each other or articulating” since, for instance,

“Science does not value all the contributions of Indigenous knowledges (IK). But twenty years ago, they [IK] were not even taken into account. Now they are saying that the best conserved territories are those where Indigenous [peoples] are, it is there where there is a higher likelihood of having forests, fresh air, of confronting climate change. Then they say, yes, it is because of IK. Now they are taking [Indigenous peoples and knowledges] into account.” (Personal communication, April 2019).

But while IENGOS and other institutions are increasingly interested on working with Indigenous organizations in climate initiatives, the central purpose of the research articles in this dissertation has not been restricted to explaining how Amazonian Indigenous climate proposals can influence or modify mainstream global climate politics and institutions. Instead, it has been to show how Indigenous climate proposals can represent other, self-determined forms of global climate politics. Thus, I have further argued that by incorporating integral territorial ontologies, ancestral knowledges, and more-than-human agency in climate politics and initiatives, Amazonian Indigenous Organizations effectively introduce a form of radical alterity to global forest and climate politics. RIA, and the OPIAC School in particular, represent global climate “alter-politics,” in emerging from other ways of being and involving “other kinds of living beings” (as in Kohn, 2013: 14). They thus make visible both a different way of conceiving politics, and important responses to climate change.

I highlight the global character of these initiatives in part to respond to the lack of attention to Indigenous transnational political organization and climate actions in the scholarly literature. This silence can demonstrate a (colonial) assumption that Indigeneity is restricted to the local, while intergovernmental politics and institutions represent the global. Scholarly analyses have, for instance, focused on the participation of Indigenous peoples in REDD+/global climate governance and negotiations, or on how to reform global climate mechanisms by including some aspects of Indigenous knowledges, or by including more Indigenous representatives—rather than on alternative political proposals at the transnational scale (e.g., Reed, 2011; Schroeder, 2010; Schroeder & Gonzalez, 2019; Shankland & Hasenclever, 2011). However, attempts to include Indigenous individuals, knowledges or cosmovisions, separated from the wider context of the territories, and following a paradigm of multiculturalism—e.g., by including some aspects of AK into environmental policies that follow Western purposes and ideas of nature—can undermine Indigenous decision-making and resource use (Nadasdy, 2003; Simpson, 2004). Therefore, this work has demonstrated that there are alternatives to the formal avenues for participation that mechanisms such as REDD+ can offer—and which often serve to legitimize government agendas rather than to influence final policy outcomes (Pham et al., 2014; Cifuentes, 2017; personal communications, 2017).

In Article II, I have further argued that RIA and the OPIAC School simultaneously enforce and challenge binaries such as local/global, as they engage with the “universal imaginary of climate change” (as in Jasanoff, 2010: 233) while also being place-based or connected to the territories. That is also the case for binaries such as traditional/modern or Indigenous/Western. In the case of the former, these initiatives appeal to the ancestral—or

even traditional—character of Indigenous knowledges, and to a historical relationship of Indigenous peoples and knowledges with Amazonian territories, to validate IK within modern politics. Additionally, the initiatives recognize the interactions between AK and other/Western knowledges, while also acknowledging the colonial patterns and power relationships among them.

Nonetheless, organizations such as COICA, and pan-Amazonian initiatives like RIA, in seeking to represent diverse Indigenous peoples, also risk erasing some of the specificities, particularities and differences amongst such peoples—and their lifeways—and among Indigenous territories. I have also found that leaders at higher political scales—who also collaborate with IENGOS on a regular basis—can often refer to the ideas of their own peoples about what a “Full Life” means, as if those ideas would equally apply to communities across the Amazon Basin. Likewise, in “scaling-up” ancestral knowledges, climate initiatives can also make the information about the different roles of knowledge holders such as elders, wise persons, or cultivators invisible.

Two ongoing concerns of Indigenous peoples and organizations—at least in what pertains to relationships with non-Indigenous people—are highlighting that Indigenous peoples are homogeneous, as there is a wide diversity of cultures—epistemologies, and ontologies—and that Indigeneity is not restricted to the past. Leaders’ affiliation, sense of belonging, and identities are to their own peoples, be they Curripaco, Murui-Muina, Shuar, Tacana, Shipibo, Achuar, Asháninka, Guajajara, Manchineri, Inga, among about five hundred other Amazonian peoples. This aspect can often become invisible in interethnic or plurinational initiatives. However, for leaders, the umbrella term Indigenous also helps them to “organize their ongoing resistance to the authority of the genocidal and/or assimilative



(settler) colonial state” (Tallbear, 2013, as cited in Subramaniam et al., 2017) and to create common initiatives that can strengthen the organizations and territorial defense.

Additionally, Indigenous organizations highlight the ancestrality of knowledges (and territories) to refer to historical relationships and their value, rather than to restrict them to the past. But there are also risks associated with this, so an open question is whether this can backfire. There are communication initiatives that might illustrate how that could happen. One of them—part of a Ford Foundation project and coordinated by US-based media agencies—for instance, shows undifferentiated Indigenous peoples as “Guardians of the Forest,” seemingly essentializing them as living in the past and protecting a “pristine” nature. This portrayal can reinforce the idea that humans can be the ‘guardians’ of a nature that is ontologically separated from them. Additionally, scholars such as William Cronon (1996) have argued that the narratives of wilderness and nature as pristine in Western environmentalism are problematic. For him, such narratives invoke ideas of a nature that is “remote from humanity and untouched by our common past”—when “everything we know about environmental history suggests that people have been manipulating the natural world... for as long as we have a record of their pass” (p. 19)—and of the peoples who inhabit these areas as “‘primitive’” peoples who do not impact the[m], and who are idealized, even sentimentalized, until the moment they do something unprimitive, modern, and unnatural” (p. 21).<sup>50</sup>

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<sup>50</sup> Studies similarly suggest that Indigenous peoples “appear to have been a positive force on th[e] landscape and its biodiversity over thousands of years” in Western Amazonia (Piperno et al, 2021; Smithsonian, 2021) or that the plants that pre-columbian societies domesticated continue to dominate the landscape in the Brazilian Amazon (Stokstad, 2017).

There is therefore the risk that campaigns such as “Guardians of the Forest” use studies that suggest that there is currently a higher forest cover and lower deforestation in Indigenous territories to reinforce an idea that these are pristine areas inhabited by people who do not impact them. When talking about these issues with colleagues at COICA, some of them expressed that that kind of slogan is necessary to reach more people around the world, so they can learn about the importance of Indigenous climate change action and support Indigenous peoples in their struggle to protect Amazonia. So, another open question is whether to create political action (and solidarity) at a global scale—and to reach broader audiences of non-Indigenous people—it is necessary to make certain generalizations, and to simplify certain messages. This also while considering that many Indigenous leaders and communities, in Amazonia and beyond, are rather opposed to seeking that kind of global attention and collaborations with actors such as IENGOs. This and other similar questions deserve more scholarly attention.

This research has started to analyze the implications of taking ontological politics and ancestral knowledges to global scales—through climate initiatives that are quite recent. Thus, more research is necessary to continue to understand how Indigenous climate initiatives reshape both global climate and Indigenous politics. Nevertheless, this research highlights that there are territorial relationships, ancestral knowledges and knowledge-based practices that create the territories as lifeworlds and that maintain forest and territorial vitality—in contrast to discourses that generalize all Indigenous individuals as inherently being nature protectors. In that regard, it is also important to recognize, as Indigenous scholars have argued, that these knowledges and relationships are often at risk from continuous processes of colonization and assimilation (Simpson, 2004; Whyte, 2017).

Lastly, I have discussed how the process of proposing and implementing initiatives such as RIA, the OPIAC School, SAT and AIDSESP's Geoserver is not seamless or without contradictions and complications for Indigenous organizations. Their reliance on external funding, as noted above, is an important challenge. The collaborations among Indigenous organizations and NGOs and donors can present opportunities but also limitations for the joint goals of creating climate change action and defending the territories, as forest monitoring programs most clearly demonstrate. I have shown how in these programs, different ontologies—or conceptions of what “nature” is or what the territories are and represent—and different definitions of environmental problems that IENGO officials have, as well as the environmental solutions that they seek to put forward (c.f., Jasanoff & Martello, 2014; Beck et al, 2017)—can sometimes align but also contradict the objectives of territorial defense. Thus, there are important barriers to collaborative work, which can even pose risks to Indigenous communities and organizations—and their quest for autonomy (c.f., Article III).

### **A Global Movement for Climate Justice?**

As mentioned above, I argue that COICA and RIA are forms of global climate alter-politics. Indigenous territorial defense further encompasses multiple other political practices—e.g., actions rejecting oil and mining projects—that share the same purpose of defending the territories as lifeworlds, and so, life itself (as in Escobar, 2015). These practices are unfolding at all scales of Indigenous political organization, and, directly or indirectly, confront the threats of climate change and other factors to the territorial integrity. There are also other political initiatives at the global scale that confront climate change, such

as the Global Alliance of Territorial Communities (involving COICA and organizations in Indonesia, Brazil, and Mesoamerica); and other Indigenous spaces of resistance to fossil fuels that have had a transnational character, such as Standing Rock (Estes, 2019).<sup>51</sup> This begs the question of whether these political practices together represent a global movement for climate justice. To respond to that question, it is necessary to carefully consider what the “global” and “justice” mean.

First, drawing from critical global studies scholarship (e.g., Sassen, 2004; Robinson, 2005; Steger, 2018) this dissertation shows how the organizations and initiatives at its center are forms of global politics and globality. That is, they represent politics that go beyond the boundaries of nations and regions—understood both as nation-states and Indigenous nations—and are characterized by extremely tight social, cultural, and political interconnections. COICA leaders further emphasize that COICA is the legitimate interlocutor of Amazonian Indigenous peoples at the global level of politics, and so that it must be a part of all global debates on climate change—e.g., by participating in instances such as the COPs. This is also a reason why COICA leaders are working to build other transnational coalitions such as the Global Alliance for Territorial Communities. However, by putting forward an understanding of the territories as multiple lifeworlds, leaders also suggest that there is not one single world in global politics, but several.

This dissertation has shown how that plurality of worlds can enter climate politics through concrete initiatives. Such climate initiatives also represent a possibility of integrating and respecting the multiple ways of “worlding”—i.e., the socioecological processes implied

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<sup>51</sup> For the Global Alliance of Territorial Communities, see <https://globalalliance.me/>.

in building collectively a distinctive reality or world[s] (Escobar, n.d.)—and of imagining how to achieve a “full life”—e.g., as represented in life plans—that exist in Amazonia. I have shown how these aspects challenge understandings of what global climate politics—and knowledges—are.

Additionally, decolonial scholars have proposed the concept of pluriverse to refer to “the political as a means of collaboration among dissenting voices over the kinds of alternative worlds we want to create” (Kothari et al, 2019: xxi). Thus, a pluriversal practice of politics is also akin to what these initiatives aim to achieve. This encourages us to think about how we can conceive global politics as encompassing not one world or universe, but a pluriverse, a “world were many worlds fit” (c.f., Kothari et al, 2019: xxviii). As such, a future avenue of inquiry for this research relates to how its findings can challenge broader scholarship (e.g., in critical global studies) that questions what the global (and/or universal) is, and what it means.

Second, this dissertation has demonstrated how the climate politics of Amazonian Indigenous organizations and initiatives are often inseparable from other efforts to confront extractivism in the form of fossil fuel extraction, and to stop the human rights abuses, criminalization, and assassination of territorial defenders across Amazonia. For many scholars and activists, such efforts would certainly be part of the global actions to scaling up and intensifying movements for climate justice (c.f., Foran, 2016: 165); and to creating a radically different, flourishing and just future (as in Bhavnani et al, 2019: 2). Yet, the leaders that participated in this research rarely refer to such efforts as actions to achieve justice. Perhaps the reason for that, as scholars have also noted, is that the “environment” and

“justice” are often defined through Western ways of thinking in research and activism (Álvarez & Coolsaet, 2020).

For instance, Indigenous scholars in North America have noted that environmental and climate justice must encompass the historical colonial violence of land dispossession, but this aspect is currently not central to discussions of justice (e.g., Giglio-Whitaker, 2019). Without searching far from Amazonia, *Proceso de Comunidades Negras* in Colombia (Process of Black Communities) also articulates its actions around a defense of life (Escobar, 2015) including when working around biodiversity goals (Grueso, Rosero and Escobar, 2003). In many cases of climate justice scholarship and activism, in contrast, justice focuses only on aspects that harm human beings (as McGregor, 2018 notes) or on certain concerns, most notably fossil fuel extraction (Jafry, 2018). That is the case even though other activities that, for instance, drive deforestation (e.g., monocultural agriculture) not only intensify climate change, but can also create other injustices such as dispossession and ecosystem loss. As such, very often, climate and environmental justice scholarship can refer to a nature that is ontologically separated from humans, in contrast to the conceptions of territories as lifeworlds.

Instead, this study shows how (climate) justice also encompasses ontological and epistemic dimensions, as the Amazonian Indigenous organizations and climate initiatives at its center illustrate. Because of integral territorial ontologies, territorial defense is a political goal that includes the concerns of climate justice, but also many others such as food sovereignty/justice or self-determination. Likewise, there are multiple political goals that diverse peoples and organizations uphold globally, as well as multiple understandings of justice. Thus, the purpose of many scholars and activists of achieving a global convergence

for climate justice should not simply include specific voices. Instead, it must incorporate a consideration of how to work across difference, while acknowledging and respecting the peoples' and collectivities' multiple ways of being, of worlding, and of interacting with other living beings.

In conclusion, this dissertation calls into question what we understand as global environmental politics and who participates in them. I show how Indigenous leaders, ancestral knowledges, and more-than-human beings enter global climate change politics in diverse and unexpected ways. Indigenous climate initiatives in Amazonia demonstrate that the relationships between ancestral knowledges, climate science and global climate institutions are multifaceted and cannot be restricted to comparisons that place the former in remote, distant locations and the latter in the whole globe. Such relationships also respond to processes of colonialism, of imposed neoliberal policies such as REDD+, and to a historical marginalization of IK.

Moreover, these initiatives show that Indigenous politics and knowledges also have a global character. I demonstrate how the recognition of the central role of Indigenous peoples and knowledges in climate politics becomes essential to the longstanding purposes of Indigenous organizations of defending Amazonian territories and life itself. Given the urgent and multidimensional threats that climate change poses, this research begins to shed light on how strategies that emerge from historically marginalized peoples and their lifeways can expand our horizon of imaginable solutions.

**Future avenues for this research and new intellectual questions**

Because of the doctoral timeline and the length of this dissertation, there are several topics that I will explore in future research articles. First, I have found that explanations of territorial vitality in Amazonian Indigenous climate initiatives can also challenge common understandings and theories about forest management—most notably, those about common property regimes (e.g., Ostrom, 1990). In RIA—as founded in integral territorial ontologies—it is the every-day relationships, practices, and more-than-human agency that take place in Indigenous territories what fosters and maintains forest vitality. As such, RIA questions understandings of forest management as institutions that—only—humans create.

Second, I have found that COICA has a role in creating an Amazonian identity (or “Imagined community,” c.f. Anderson, 2006), that is often linked to the implementation of Pan-Amazonian initiatives. For instance, as mentioned above, COICA seeks to address the different ideas of what a “Full Life” is, and to respect life plans. Yet leaders can often refer to their own views of living well—and capture them in program documents or declarations—as if they would apply to peoples across the basin. Third, in that same line, I will explore how the Amazonian Indigenous organizations construct ideas of (what they call) an Indigenous economy, a Full Life, and their relationships to life plans. I find that the meanings of such concepts are not always clear for community members in places such as Amaraeri. These are rather concepts that they should learn to participate in community development and climate change initiatives. Additionally, life plans can be instruments that make the peoples and territories legible to external actors. These additional articles can contribute to several strands of literature, such as that on alternatives to development, post development, buen vivir (sumak kawsay/good living), (post)neoliberalism, as well as of Indigenous identity (e.g., Li, 2000; Escobar, 2010; Radcliffe, 2012; Zimmerer, 2015).



Furthermore, this research has shed light into additional intellectual questions for future research projects. In Article III, I highlighted how the aim of IENGOs to create “environmental police” conformed by community monitors through forest monitoring programs. Thus, one research question to pursue is how forest monitoring technologies can also change the subjectivities of community monitors (c.f. Gabrys, 2016) and create new forms of environmental governmentality (c.f., Agrawal, 2005). To respond to this question, I will carry out additional fieldwork to analyze how forest monitoring programs are implemented on the ground.

Lastly, there is another key question that emerged from my fieldwork: how gender mediates in the ways in which knowledges and ontologies shape Indigenous climate planning. COICA women leaders argue that women’s knowledges about agriculture and biodiversity are central for climate change responses. Further, they note that gender roles—e.g., for food production—are complementary rather than binary in Amazonia, and that women relate to more-than-humans, like crops or water, in specific ways. Yet, these considerations are often excluded from climate strategies. Feminist political ecologists have questioned binary gender categories, essentialist roles of women and the agency of non-human nature in climate risks and adaptation, yet they have largely missed how these aspects inform strategies for climate adaptation and resilience (e.g., Tuana, 2008; Arora-Jonsson, 2010; Carr & Thompson, 2014). I plan to address this question and the gaps in the literature in a future research project.

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