

CHAPTER 6

Amazonia Beyond Borders

Indigenous Land Protection for an Indigenous Group in Voluntary Isolation

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Manxineru people¹

During the COVID-19 pandemic, several Amazonian Indigenous peoples reminded others that their history has fundamentally been shaped by different epidemics resulting in considerable population losses, grief, and intergenerational trauma. The new diseases introduced not only significantly impacted Indigenous peoples at the time of colonization, but also in recent decades numerous Indigenous groups have suffered disproportionately, as many individuals within the group lost their lives. In the 1990s, for instance, new diseases brought by missionaries killed one-third

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of the Zoé people. In the 1980s, one-fifth of the Yanomami people died when new roads and goldminers brought diseases causing a health catastrophe.² These are only some recent examples. At the beginning of the COVID-19 outbreak in the Amazon, Indigenous representatives pointed out in virtual discussion events that now non-Indigenous peoples can also experience what it means to face a situation where one lacks immunity to a new disease and suffers a consequent sense of great loss. There are also emotional effects on the memory on account of large and rapid mortality rates of relatives and friends. These issues are at the core of the Amazonian Indigenous people's historical memory of contact, along with memories of physical dominance, slavery, and massacres.³

Furthermore, in the COVID-19 pandemic, several Indigenous peoples in Brazil became even more vulnerable, because growing invasions of their territories intensified the circulation of the lethal virus. The most vulnerable have been Indigenous peoples in so-called voluntary isolation, meaning those who until today have decided not to engage with Brazilian society more generally and have instead chosen to live their lives in traditional ways. As a result, these Indigenous groups have little immunological resistance to new diseases, even regular flu. Their land protection is, therefore, crucial to protecting the lives of these peoples. In this chapter, we discuss such land protection efforts by the Manxineru (Manchinery/Manchineri) people in Brazilian Amazonia in relation to their neighboring people in voluntary isolation. These people are internationally known as the Mashco-Piro, but the Manxineru call them the *Yine Hosha Hajene*, which in their language means literally "the Real People who live in the forest." They also use the term *nomolene*, our kin. In Portuguese, the term *Povo desconfiado* (Suspicious People) is used, as the Manxineru think that their kin in voluntary isolation have decided not to trust strangers, are suspicious of others, and are wary. The global COVID-19 situation may certainly give the dominant society a better understanding concerning the trauma and fear that the *Yine Hosha Hajene* have in relation to people in the dominant society, but also to other Indigenous groups.

The *Yine Hosha Hajene* live and move on both sides of the Brazilian–Peruvian border, and seasonally inhabit the reserve that was officially demarcated for the Manxineru, namely the Mamodate. This Indigenous reserve is situated in the state of Acre, Brazil, and shares a border with Peru. The Brazilian–Peruvian border area in its full length is exceptionally rich in biodiversity.⁴ In the state of Acre alone, cultural diversity is high as there are approximately 20 Indigenous peoples, including four Indigenous peoples in voluntary isolation, speaking languages of the Arawak, Arawá, and Pano language families. Overall, this area is very rich biologically, culturally, and linguistically—issues which have been shown to be closely interlinked. The state hosts various types of protected areas, such as ecological reserves, national state parks, reserves for traditional extractivist activities, and Indigenous reserves.

Indigenous territories and nature protected areas on the Peru–Brazil border area are threatened by private economic actions and public policies, which promote infrastructure projects, such as the construction of roads, the exploitation of natural resources, and large-scale cattle ranching and agriculture. Besides state-led highway construction, smaller roads are constantly opened, causing more deforestation and enabling access for illegal mining prospectors and loggers. These interfere physically, but also in the form of pollution, decreasing the game animals and fish, and bringing new diseases.

These extractive industries cause several risks to the Manxineru in Brazil, where they number some 900 persons, but especially to their kin living in voluntary isolation, the *Yine Hosha Hajene*, with an estimated population of 600 people. Thus, the Manxineru have taken strong action in land protection as a go-between with other Indigenous groups and the authorities of the dominant society. Their own land management practices have also been crucial in this effort. Conservation biologists and ecologists, among others, have recently debated the strengths and weaknesses of different conservation practices, ranging from those that exclude humans (leading to the establishment of the first national parks) to those

that permit human actions in different ways.⁵ In conservation and sustainability studies, so-called social-ecological approaches seek to embed actions within complex systems of social values and stewardship.⁶ The goal is to explain how people actually act in conservation so that measures may be developed that will benefit both ecosystems and human communities. Biodiversity conservation is about understanding social systems that dictate what kinds of human–environment interactions exist in social–ecological systems. In other words, they draw from the idea that there is no conservation without people. From this perspective, community-based conservation efforts that engage with Indigenous knowledge (local or traditional ecological knowledge) have been used in monitoring and assessment, and have engaged complementarily with Western scientific environmental variables and indicators.⁷

Yet, the achievement of a synergy between Indigenous knowledges, Western scientific knowledges, as well as other knowledges is often considered challenging because of the incommensurability of these categories, the different terminologies, practices, and norms used, as well as different kinds of generalizations to be derived from place-based Indigenous ways of knowing.⁸ Furthermore, interests, power relations, political concerns, and values also play a crucial role in achieving impactful dialogue.⁹ Scholars who have contributed to social epistemological literature and have pointed out that diversity of perspectives can be epistemologically valuable have also noted that there are often factors that are not purely epistemological, but rather based on the interests of people.¹⁰ These can create ignorance toward certain perspectives and ways of knowing. Racism, discrimination, suppression, and the “invisibility” of Indigenous peoples have meant that large Indigenous populations continue to be marginalized in Latin America. Such factors have hindered the recognition of their territorial rights, and have limited their access to schooling and health services, among other things.¹¹

In this chapter, we will discuss the Manxineru methods to overcome these situations when economic activities in the proximity of their demarcated lands have increased. This chapter

engages with Indigenous, human ecology, and sustainability studies. Our argument is that politics and economic interests have to be taken into account at the regional, federal, and state levels. Although land protection actions have been carried out in an Indigenous community-based effort, and knowledge synergy has been encouraged and is taking place at the local level, complex political structures at the state level and international economic interests that exploit the Amazonian rainforest can impede transformative actions.

Our research methods have been to co-live with the Manxineru and participate in different research projects related to the revitalization of local biocultural interaction and heritage. The second author is Manxineru and from a young age he has been one of his community's spokespersons. Trained as a teacher, he has worked in his territory, continued his studies in linguistics at university, and has participated in regional, national, and international events, as well as worked in Indigenous organizations and in a governmental office. The first author is a non-Indigenous person, who has carried out research with the Manxineru since 2003. Her field research in the Manxineru territory took place in different periods from 2004 to 2008, and she has interacted with the community since then. She also works with another Arawak-speaking people, the Apurinã, and has collaborated in the region with local Indigenous and non-governmental organizations.

In this chapter, we first present the history of the Yine people (including the "Piro," Manxineru, and *Yine Hosha Hajene*) in Southwestern Amazonia, and then look at how the Manxineru have organized themselves in the protection of their lands. We then discuss how the Amazonian forest protects not only human lives, but social systems, or rather assemblages of land, forests, waters, animals, and local human dwellers. For the Manxineru, their efforts to protect and guarantee a peaceful land for their kin in voluntary isolation is connected with an understanding of the healthy relations of the human–environment assemblage. Finally, we will show how besides the synergy of knowledges, different interests and politics play a principal role in Manxineru land protection and in its (un)success.

The *Yine* Lands in the Southwestern Amazonia

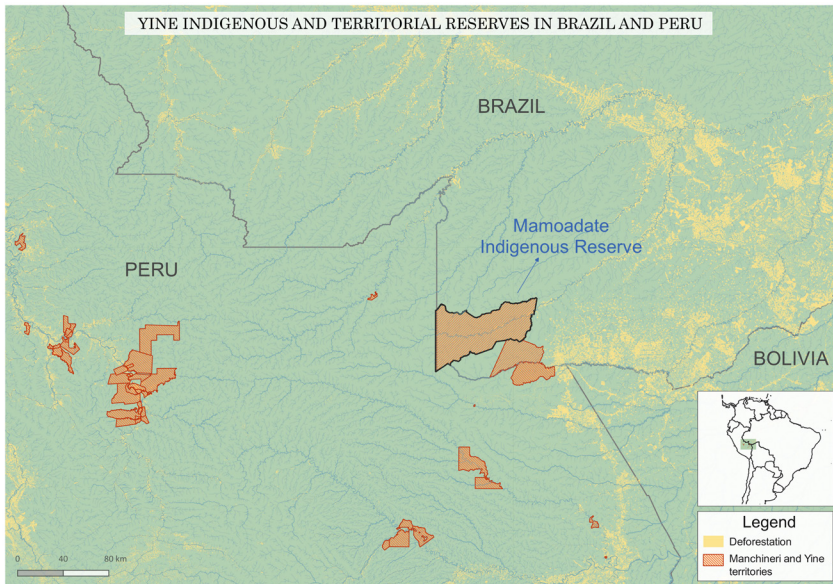
Southwestern Amazonia has been inhabited by the *Yine* people, especially along the Urubamba, Madre dos Dios, and Yaco Rivers, since time immemorial. The *Yine* were divided into several smaller groups, such as the *Manxineru*, whose languages belong to the Arawakan language family. For a long time, the *Yine* were referred to by their colonial name, *Piro*. The *Manxineru* in Brazil are closely related to the *Yine* (*Piro*) in the Peruvian Amazon, where they number some 5,000–7,000 persons. They all call themselves *Yinerune*, “the real humans.” Most *Manxineru* and *Yine* speak their native language, as well as Portuguese or Spanish respectively.¹²

From the colonizers, the Spanish made first contact with the *Yine* in what is now known as Peru by the 17th century, but the Yaco River, the home of the *Manxineru*, was colonized later than other parts of Amazonia. At the end of the 19th century, Southwestern Amazonia became a major source for rubber production for global markets. A large number of rubber traders exploited the land for this valuable raw material, and forced Indigenous peoples to work for them. The Indigenous groups tried to escape, but those who were captured or chose contact as their method of survival were enslaved and forced to collect and produce rubber. The *Yine* people, and their subgroup *Manxineru* in contemporary Brazil, were among the latter group. Consequently, their social organization and socio-cultural ceremonies and practices collapsed due to the new economic activities they were forced to engage in. Many of their neighboring groups died in massacres and in slavery. Thus, historical documents from the Purus River basin registered several Indigenous groups that no longer exist. The rubber boom also brought many non-Indigenous rubber tappers to the region. All this radically changed what the first explorers in the 17th century and archaeological evidence witnessed, namely sophisticated and extensive Indigenous settlements and even early precolonial urbanity in the Northwestern Amazon.

The *Yine Hosha Hajene* (Mascho-*Piro*) are one of the groups that escaped the rubber extraction business, which altered the life of various Indigenous groups. It is currently thought that they were

one of the Yine groups, but continued in isolation, changing their lifestyle. The Manxineru, Yine, and *Yine Hosha Hajene* speak a mutually understandable language, as shown by a few contacts, and their material cultures are in some aspects similar. Among these groups, the *Yine Hosha Hajene* have remained in isolation until today. Since the beginning of the 20th century, the Brazilian state agency responsible for Indigenous population was established (SPI, Indian Protection Service), and it had differing strategies toward Indigenous people, varying from assimilation to attracting them to safer contact for their protection.¹³ For the groups in contact with the dominant society, it took hundreds of years before the Indigenous peoples could gain their human rights, and in South-western Amazonia the first Indigenous protected areas were established only in the 1970s. Among them is the Mamoadate reserve, which covers 313,646 hectares. It is located on the banks of the upper Yaco River and belongs to the municipalities of Assis Brasil and Sena Madureira in the state of Acre. It is demarcated for the Manxineru and Jaminawa, for whom this territory was allotted in 1986. Altogether the population of Manxineru and Jaminawa is 1,210 inhabitants and 205 families in the Mamoadate. Currently, the Manxineru population lives in 12 villages, Extrema village being the last one when accessing the reserve from down river. Today, Manxinerus also live in Seringal Guanabara and Cabeceira do rio Acre Indigenous reserves, as well as in urban areas. Map 6.1. shows the contemporary official Yine territories in Brazil and Peru, excluding the places inhabited by the Yine Hosha Hajene, which are shown in the frontier area in Map 6.2.

The *Yine Hosha Hajene* occupy the upriver areas of the reserve, close to the Peruvian border. They are officially known as an Indigenous people in voluntary isolation (*índios isolados*), which is a special category in the Brazilian state's current Indigenous agency FUNAI's classification (Fundação Nacional do Índio, under the Ministry of Justice). This indicates that in Amazonia there are groups who until today have not been officially "contacted." FUNAI also uses the category of recently contacted groups (*recém contatados*) for those who have some contacts with national Indigenous society or have changed considerably some aspects of their



Map 6.1: The Yine (including Manxineru) territories in Brazil and Peru. Map adopted by authors from sources by the Funai and Peruvian Minister of Culture.

communities because of contact. Indigenous motives for isolation are diverse, and can be understood in a historical framework. The reasons can be previous epidemics, sicknesses, and slavery (such as in the rubber boom), which dramatically transformed the life of Indigenous people and for some groups resulted in making the decision to live isolated from others.¹⁴ The peoples in voluntary isolation have hardly any contact with other Indigenous or non-Indigenous groups, but may have changed considerably because of the altering neighboring society and the changing environment. Their kinship systems are diverse, and are often based on marriages of cross-cousins. For these peoples, protected areas of different kinds are fundamental, and they may use a broad area for their economic activities, fishing, and hunting. Many of them are mobile beyond the national borders.

The actions that threaten Indigenous peoples in the area are designed and led by the state and by enterprises, but also by missionaries, tourists, and so forth. For a long time, public policies have promoted the exploitation of natural resources, such as timber

and petroleum, and the establishment of larger infrastructure projects. Southwestern Amazonia was hugely impacted by the construction of the Pacific Highway. It was a massive trans-governmental project to pave a road from Brazil through the Southwestern Amazon to the Pacific, enabling the transportation of beef, and has significantly increased the agri-business and cattle ranching in the region. The paved highway (called the BR-317 on the Brazilian side) from Rio Branco (the capital of Acre state) to Assis Brasil (the border municipality) is now deforested in its full length and hosts numerous cattle ranches. Although it does not reach the Mamoadate reserve, and passes it by a distance of approximately 80 km, it hugely affects regional ecosystems and biocultural diversity. Furthermore, several new roads have been built in the region, and one such recent project was a road opened to connect the municipality of Iñapari to Puerto Esperanza in the Peruvian territory, near the Yaco River headwaters. This impacted the Mamoadate, among other Indigenous territories and protected areas.

As mentioned, diseases and viruses caused by the dominant society have for a long time been an invisible but real threat to the Indigenous peoples. For Indigenous people in voluntary isolation, common ailments, such as flu and diarrhea, can be lethal. The Manxineru are occasionally vaccinated, but Indigenous groups in voluntary isolation are extremely vulnerable to infectious diseases, which can rapidly and brutally lead to the groups' extinction. This situation cannot be separated from the overall suppression and prejudice toward the original inhabitants of the land and their invisibility in state politics. In recent years, the political climate has become even worse in this respect, despite Indigenous peoples' ecological knowledge and contribution to the world's biodiversity. There is not only the continuous presence of illegal activities, but also of religious movements, such as Pentecostal churches, which often consider traditional Indigenous rituals, healing techniques, and stories related to non-humans as destructive for a person's positive development. Additionally, economic actions supported by the state are in addition to these pressures. These issues affect local knowledge and its production in diverse ways.

Forest Lives and Active Stewardship

Indigenous knowledge is typically about generations of practices, skills, experiences, innovations, and ways of knowing transmitted, regenerated, and updated across generations. It includes social interactions and diverse cultural, environmental, economic, and spiritual aspects. It is embedded in languages, stories, songs, craft-work, dances, and ceremonies, as well as many other material and immaterial expressions.¹⁵ Traditional ecological knowledge refers in particular to knowledge about managing land, stewardship methods, and interacting with different living beings.¹⁶ Because of historical relations with the land as well as their views on the future lives of their children, Indigenous perspectives can differ from other local perspectives in certain regions. The rich biocultural diversity in the Mamoadate is indeed linked to the Manxineru's stewardship, management practices, comprehension of forest lives, and emotional aspects linked to these issues. In order to guarantee healthy relations in human–environment assemblage, the key practices have focused on strengthening the social interactions and collaborations of different actors and remanaging traditional forest resource use in specific territorial areas.

In the Manxineru's thinking, the *Yine Hosha Hajene* are not separate from their human–environmental history, in which ideas of interaction, reciprocity, relatedness, and dependency are crucial.¹⁷ The richness of non-human lives in the ancestral territory cannot be separated from interlinkages between humans and non-humans, including water “that all living beings drink,” as their elders say. The Manxineru are not conservationists, but they protect and care about the healthy relations of animals and trees that they also treat as their kin. In this human–environment assemblage, the relationships are manifested in hunting practices, slash-and-burn agriculture, forest resource use, and gathering economies, and they significantly protect the land. The Yaco River is a large biocultural landscape; it is the result of a long history of human lives, dwelling, and movement, but also different lifeforms, especially animals, and plants that have their own life and are entangled with humans and their management practices.

In fact, there is strong evidence that shows how the actions and domestication processes of species by Amazonian Indigenous populations have contributed to diversifying the lands.¹⁸

Context is central in Manxineru's knowledge-making practices, including with whom and in which place knowing occurs.¹⁹ This relational epistemology, the idea that knowledge is produced in relations, is closely linked to ideas of relational being, in which beings come to exist through relations. The onto-epistemology and practices of knowing of the Manxineru are founded on relations. In this way, they learn to be and "read" the forest. From a young age, many Manxineru children have learned to observe the movements of entities, recognize their presence, and trace them.

It is crucial to note that the Indigenous reserves have the richest forest cover, and that satellite images can show their difference even to the neighboring protected nature areas. Traditional extractivist reserves, known as Resex, in the Acre state are important places to preserve forest areas and are ecologically diverse. Recent studies have shown, however, that increasing cattle ranching and deforestation activities are taking place inside these areas.²⁰ The interests and environmental values of Indigenous communities are different, as shown by the way they protect their lands despite a lack of governmental resources for monitoring and protecting the land. However, in the face of the environmental destruction caused by development megaprojects and large-scale extractive activities, the resilience of Indigenous communities has been severely tested.

The Importance of the Protected Space Mosaic for the *Yine Hosha Hajene*

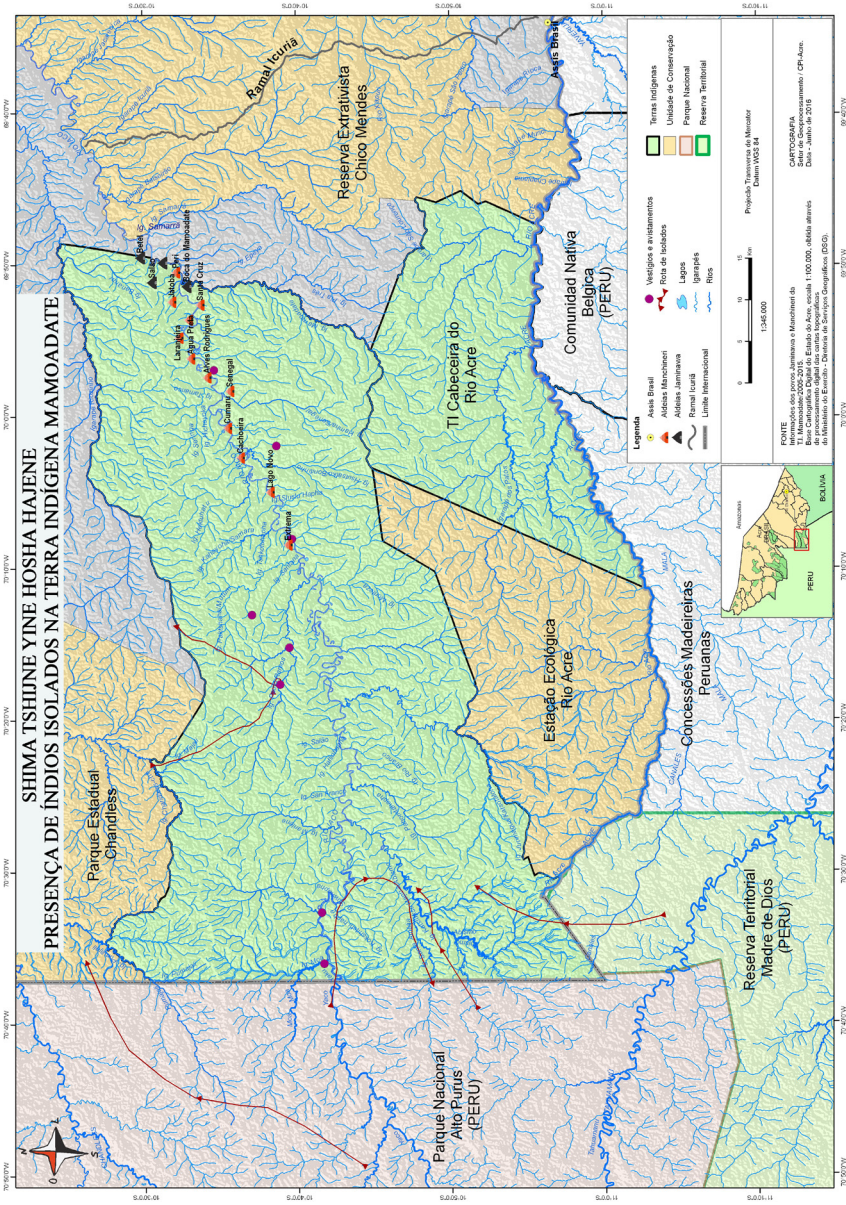
The *Yine Hosha Hajene* currently live in the Mamoadate Indigenous reserve, the Cabeceira do rio Acre Indigenous reserve, the Ecological Reserve of Acre River, the Chandless State Park in the Brazilian State of Acre, and, on the Peruvian side, the Madre de Dios territorial reserve, as well as the Upper Purus National Park (Thauamano, Las Piedras, and the Upper Madre de Dios River). On the Brazilian side, they live by the headwaters of the Yaco River and its tributaries, the Abismo, the Marilene, the Capi-

vara, and the Paulo Ramos. For a long period of time, this area has offered a significant living place for the *Yine Hosha Hajene*, as well as for numerous game animals, fish, and other living beings that contribute to the environmental diversity in the region.

The *Yine Hosha Hajene* travel into this large area according to the seasonal availability of different forest resources, and they are divided into smaller groups. In the rainy and summer season, their paths change according to the supply of palm fruits, turtle eggs, and so forth. The freshness and health of the Purus River waters and its tributaries are crucial for all living beings in the area. Yet, increasing lethal threats for the *Yine Hosha Hajene*, such as the activities of loggers, mining, and drug traffickers, as well as road construction projects, have changed their traditional trekking paths. This has resulted in them coming closer to other Indigenous communities since 2013, especially with the Peruvian *Yine* communities, but recently also on the Brazilian side with the Manxineru communities. On the Brazilian side, the *Yine Hosha Hajene* currently have three different trekking routes (marked with red lines in the map) that allow their circulation in the area and the movements to the Mamoadate reserve (the light green area in the center of the map) as shown in Map 6.2.

All the *Yine Hosha Hajene*'s movements to the Mamoadate occur through the neighboring protected spaces of nature and Indigenous territories. However, illegal activities are increasing in this area, regardless of whether or not the land is a protected area, and on the Peruvian side, a large area is already parceled out to logging and mining activities. In Map 6.2, the town of Assis Brasil can also be located, through which the new paved Pacific Highway passes. All these changes to the regional ecological systems have brought physical threats to Indigenous peoples.

During the last few years, the *Yine Hosha Hajene* in the Mamoadate reserve have come closer to the Manxineru villages, especially by using a new path through to the Brazilian Chandless State Park. This new path has even led them to the Paulo Ramos tributary in the upper reaches of the Yaco, which is about 3 hours from the last Manxineru village, Extrema (after that, the Yaco River continues to its headwaters in Peru). Some 10 years ago, their closer presence was observed by Extrema villagers when the Manxineru were



Map 6.2: Yine Hosha Hajene's movements in the Mamoodate Indigenous reserve. Source: CPI-ACRE, Artur et al., "Yine Manxinerune Hosha Hajene," 44.

disturbed to find signs of *Yine Hosha Hajene* occupancy so close to their village. This unusual proximity revealed that the *Yine Hosha Hajene* had no place to go, and that their territory was threatened. This new area can be seen in the cluster of three purple dots on Map 6.2 (vestiges of the *Yine Hosha Hajene* identified) northwest from Extrema village (the first in the line of 12 red huts, which are the Manxineru villages along the Yaco River). Manxineru who go hunting and fishing in the upriver area have sometimes been aware of the seasonal presence of the *Yine Hosha Hajene* by the wide paths, little huts made of palm leaves, and the bones of game animals that have been eaten. In recent years, the *Yine Hosha Hajene* have settled only within an approximately 90-minute walking distance from Extrema, in “Tabocão,” on the other side of the Yaco. They come to this area through the Cabeceira do rio Acre Indigenous reserve, and since the end of 2020, their presence is edging increasingly closer to Extrema village, currently only a 1-hour walking distance away.

As can be seen in Map 6.2, the Mamoadate territory is bordered by areas that are not protected and are already highly deforested. The *Yine Hosha Hajene* have reacted to the changes, and according to the Manxineru, are in a constant state of urgency in looking for a place to live with their families. On the Peruvian side, the *Yine Hosha Hajene* have appeared several times on the beaches, and even asked the Monte Salvado community for bananas. These sightings suggest that they are experiencing increasing pressure from logging and other economic forces. As a result, the *Yine Hosha Hajene* are experiencing difficulties in finding a peaceful place to live and in securing sufficient food from the forests. There have already been violent conflicts and attacks between them and non-Indigenous peoples, and even between Indigenous peoples, in which some people in Peru have been killed. The last incident occurred in Puerto Nuevo along the Piedras River in April 2020, when a Yine man who was fishing was killed by the *Yine Hosha Hajene*. It was later determined that drug traffickers, who had moved into the border area, had in fact killed a *Yine Hosha Hajene*. The *Yine Hosha Hajene* had mistakenly thought that the Yine man was responsible, and had consequently sought revenge for the loss of their community member.

All of these pressures on their traditional ways of life have influenced territorial management, and the decisions by the Indigenous groups in the region have aimed at securing a safer land for living, hunting, fishing, and gathering. Because the pressure of illegal activity affects the territory of isolated Indigenous groups, the Manxineru have increasingly sought partnerships with civil society organizations, the Indigenous movement, and international organizations that defend the rights of Indigenous peoples. By these methods, they have managed to co-exist with groups with differing interests and values that oppose and ignore Indigenous social–ecological systems and biocultural heritage.

Manxineru's Commitment to Managing Ancestral Lands

Mamoadate land is a relatively large territory, and thus it is difficult to monitor by land or river. On the Brazilian side, when entering the Mamoadate by the Yaco River, there is not even a sign demarcating Indigenous territory, as is the case in some other territories. Neither the limits of the reserve nor the demarcation of the territory have been clarified since 1986, but this is also common with many other Indigenous territories in Brazil. The governmental representatives have claimed that this is expensive: the cost of tools, equipment, gasoline, boats, and outboard motors is high. Difficulties in monitoring a large territory can lessen the self-organization of Indigenous communities. Self-organization at the moment of change has been recognized as one of the main issues in resilient human–environment systems, and requires co-managed actions.²¹

One of the key actions in land protection has been a new territorial use plan: leaving a separate part of the territory to the *Yine Hoshá Hajene*, so that they can feel safer and have more abundant and diverse forest resources. There is an agreement among the Manxineru and Jaminawa inhabitants of the Mamoadate reserve that the *Yine Hoshá Hajene* can use the land from the upper parts of the Yaco River, namely the Abismo tributary and beyond up to the Peruvian border, and this is also included in their official

territorial management plan.²² The plan was prepared in collaboration with governmental and non-governmental organizations.

When the Manxineru and Jaminawa reserved the most peaceful lands and forest resources for the *Yine Hosha Hajene*, they also created resources for themselves and for their future generations. The Manxineru had not made use of the headwaters of the Yaco River for some time. However, they consider the headwaters to be an important source of life, and this was also discussed in their territorial plan. The headwater tributaries of the territory also remind them of their ancestors who lived and hid there at the time of colonization, which also affects the continued human–environment interlinkages. All the tributaries have Manxineru names, and as they are the places of ancestors, they can in some sense be regarded as sacred places. The headwater areas are also rich in biodiversity. Studies have shown how sacred forests often increase biodiversity, as is evident in Tibet, where the biodiversity in such places is much more prominent than is usually the case.²³

Officially, FUNAI's Ethno-Environmental Protection Front of the Envira River (*Frente de Proteção Etnoambiental Envira*) is responsible for monitoring and protecting the Indigenous peoples in voluntary isolation in the state of Acre. Their movements are observed from aerial images, but also from observation points in the forest areas. In the Mamoadate there is, however, no such infrastructure, but the Manxineru have been active in reporting the signs of the *Yine Hosha Hajene* in their territory to FUNAI officials. For decades, the presence of the *Yine Hosha Hajene* has been known by the Manxineru, but their traces are appearing closer to Extrema village, and this has been of concern to the Manxineru. The Manxineru know that if one accidentally comes too close to the *Yine Hosha Hajene*, they might feel threatened, and this might result in violent attacks. FUNAI has carried out a few expeditions along the Yaco River, but in the last few years the Manxineru have tried to press the authorities to establish a land protection system in their lands. Whether any action is taken depends on FUNAI's federal office in Brasília.

While developmentalist projects in the area continue to threaten Indigenous peoples' initiatives, Manxineru land management practices have aimed at guaranteeing that the *Yine Hosha Hajene* can

feel safe from epidemics and from people who violate their territorial borders. Their contribution by way of their livelihoods to the healthy relations of the human–environment assemblage is crucial, such as their hunting practices, forest resource use, gathering economies, and slash-and-burn agriculture. These practices are based on ideas of reciprocity and interdependence with non-human subjectivities. Manxineru values and stewardship structures in their land conservation efforts have kept the resilience of their social-ecological system high. Emotional issues are also involved. In our previous work, which addressed the Manxineru's motivations for the protection of their kin in voluntary isolation, we highlighted the role of the Manxineru's agonizing memory of contact with the dominant society.²⁴ That contact altered Manxineru history, and many other Yine subgroups no longer exist. For the Manxineru, their kin in voluntary isolation represent the time of their ancestors before settler-colonization, the time before their own knowledge and language became fragile and suppressed. The *Yine Hosha Hajene* are regarded as preserving richer environmental knowledge and maintaining the Yine language more strongly than the Manxineru themselves have been able to do during their oppressed relations with the dominant society. This notion was expressed in the report written by the second author for an Indigenist non-governmental organization on the presence of the *Yine Hosha Hajene* in his territory:

When contact started with the Manxineru people, much of our ancestors' traditional knowledge became frozen, because of the time of escaping from and the eventual working for the rubber patrons. At that time, we had to abandon our traditional festivities, medicine, craftwork, ceramics, foods, social organization, and so on. Even if we still have the knowledge, it became weak. Our kin still living in the forest still have a possibility to practice these things, but they spend their energies on escaping and they don't have time.

Today their attempts to escape make them nomads, as they escape from their enemies, and look for a place to maintain their culture and knowledge. For this reason, we Manxineru think of the future of these kin, and we don't want to happen to them what happened to the Manxineru. The slavery work under rubber patrons was suppression of our people by the dominant society. So [we hope

that] our kin in voluntary isolation can have the possibility of maintaining their knowledge and preserving it for future generations.

The Manxineru have taken an active initiative in the discussions with different actors, such as the Brazilian state and international, governmental, and non-governmental organizations, as well as other Indigenous communities in the region. Besides the support of FUNAI, they have been active in creating a dialogue with non-governmental organizations with whom they had collaborated before, such as the Comissão Pró-Índio (Pro-Indian Commission [CPI]) and the Indigenist work center CTI, asking for co-organized actions. Community workshops were organized to discuss the *Yine Hosha Hajene's* situation, challenges, and possible solutions. Also involved in this partnership were the Rainforest Foundation Norway (RFN), who financed some actions, through their programs on biodiversity conservation. Community workshops also mobilized Indigenous inhabitants, both Manxineru and Jam-inawa, and allowed their experienced knowledge holders to give advice and make decisions. The information was collected and placed on the maps, and new management of the land co-planned.

The community workshops became a space for Indigenous leaders to express their ideas, and some of them created novel cross-border encounters with Peruvian and Brazilian institutions and the leaders of regional Indigenous organizations. The work aimed at creating a new policy for the protection of the *Yine Hosha Hajene*, as well as exchanges to report on these people. In addition to the workshops with Indigenous representatives, the Manxineru people constantly carry out monitoring and evaluations in their territory in order to obtain information about the movements of the *Yine Hosha Hajene*. They have also carried out expeditions together with Indigenist organizations to obtain more information on activities in their territory.

The vulnerability of isolated Indigenous peoples in the Acre-Peru border area has also been debated by government agencies and civil society in binational meetings. In these meetings, the responsible organization of the Brazilian state has been FUNAI, while since 2013 it has on the Peruvian side been the Ministry



Figure 6.1: Community workshops organized with the Comissão Pró-Índio in 2016 to map the vestiges and paths of the *Yine Hoshá Hajene* living in voluntary isolation. Photo: CPI-Acre.



Figure 6.2: Testing a GPS in a community workshop for the monitoring of the *Yine Hoshá Hajene* vestiges' locations. Photo: CPI-Acre.

of Culture. In relation to the Mascho-Piro, the Native Federation of the Madre de Dios River and Tributaries (FENAMAD, *Federación Nativa de Madre de Dios y Afluentes*) has been the most active. On the Brazilian side, the Secretary of the Environment also became more active about the Mascho-Piro in the nature protected areas, although in practice state-level policies have been sparsely implemented. For many years, the nation-state representatives, at both federal and state levels, showed their support for and interest in Indigenous peoples and their knowledge, and some further positive actions were taken. In the last few years, this has changed, and the acknowledgement of Indigenous knowledge is rarely mentioned.

However, as a result of regional and international articulation, an integrated protected area was created for the *Yine Hosha Hajene*, uniting several demarcated Indigenous territories and nature conservation areas on both sides of the Brazilian–Peruvian border region. In local-level discussions, local actors made innovative initiatives, among others the establishment of the so-called Territorial Passageway for Isolated Indigenous groups (*Corredor Territorial de Povos Indígenas Isolados*). It was designed for different protected spaces of nature on the Brazilian–Peruvian border area, namely (besides the Indigenous territories in Brazil and Peru), the Ecological Reserve of Acre River and the Chandless State Park in the Brazilian State of Acre, and on the Peruvian side, the Madre de Dios territorial reserve and the Upper Purus National Park.²⁵ The mosaic of the different conservation and Indigenous areas allows a safer space for mobile Indigenous people in voluntary isolation, such as the *Yine Hosha Hajene*, as well as transnational governance models for conservation. Even if this Territorial Passageway exists largely only in theory, the initiative did bring together the representatives of the state-organized Indigenous reserves, the nature protection areas, and the traditional extraction reserves in the region. The mosaic also included ecosystems of plants and migrating animals.

As the Manxineru and the Yine have detailed observation and knowledge of the area, they are the key agents in land management and protection activities. Their knowledge and understanding are reflected in their management practices, local ecosystems, and institutions. Furthermore, they have strong leaders and their

own communication and organization systems. Social-ecological collectives and their self-organization at moments of change are crucial for resilience and survival, and thus for further sustainability.²⁶ As Berkes has noted, self-organization capabilities can also deal with several institutions and, if they sustain self-organization, they act as a social control mechanism—for instance, in assisting when there are gaps in knowledge.

Along with the establishment of national and international alliances, the Manxineru and Yine spokespeople traveled to different events in order to share information about the situation. All of this shows their capacity to respond to crises. Connections between Indigenous communities and Indigenous organizations are critical for the governance of land protection actions and management beyond the borders. The second author has been the main Manxineru spokesperson to travel to discuss the situation of the *Yine Hosha Hajene* with the Yine relatives living in their communities on the Peruvian side; among other places, he has also traveled to the Monte Salvado community by the Piedras River.

Our case shows that eventual co-planning was drawn from the different views and knowledge of different actors. In the Acre state, community approaches based on human–environment collectives had already been established for some time, and its local non-governmental institutions and several individual governmental authorities have experience in engaging with local and Indigenous knowledge in their projects, such as in the so-called ethno-mapping efforts. The regional alliance built can also be understood from a historical perspective, because the state of Acre has a long history of environmentalist and Indigenist movement by the Peoples of the Forest. Since the 1970s, this alliance promoted the sustainable use of forest areas, which led to the founding of reserves where people extracted resources in sustainable ways. Their activities since that time have been weakening due to state political changes, but in relation to some issues the alliances are still being rebuilt, as some organizations continue to share similar interests with Indigenous peoples.

On the one hand, the Manxineru's regional commitment to protect the lands drew from Indigenous knowledge, produced

intergenerationally and collectively. On the other, the governance models established were not created only by Indigenous communities, but in the network of non-governmental organizations and government sectors. Overall, the challenge was not the commensurability of Indigenous knowledge with other knowledges,²⁷ although that has been one problem between the Manxineru and some individual state authorities,²⁸ but that the decisive structures of nation-states have rarely implemented monitoring and protecting activities in the region. Despite the linkages between several actors toward the protection of Southwestern Amazonian biocultural landscapes, governmental institutions have not integrally implemented international Indigenous and human rights laws and constitutions. This may well lead to genocide, as some researchers have noted.²⁹

Several arguments have been made concerning the benefits of integrating different knowledges and their difficulties,³⁰ but here we see that many other issues are involved. These are linked to state politics and the dominant society's overall economic interests to exploit natural resources beyond sustainable limits, as shown by forest deforestation and how patchy forest coverage has become. The Manxineru's values and knowledge are at the core of their politics. They also advanced the interlinkages between humans and the environment in spiritual practices, and in their schooling systems. Even if these matters are challenging to express for people with different epistemological thought and knowledge-making practices, the Manxineru have recently made efforts to pronounce these issues publicly. The second author has worked hard to train himself to be a spokesperson for his people on Indigenous rights issues and education, which has taken him to national and international events. The Manxineru environment assemblage was even addressed on two occasions in his presentations at the UN headquarters. The first one was at the UN Expert Mechanism for Rights of Indigenous Peoples (EMRIP) event in Geneva in July 2018, and the second was in New York at the UN Permanent Forum for Indigenous issues (UNPFII) in April 2019. The first author also participated in both of these events as an academic expert (as a speaker and workshop organizer on cultural heritage). In the 18th UNPFII Session in the UN headquarters,

the second (Manxineru) author wrote his presentation for Item 14, the Dialogue with the Special Rapporteur on the Rights of Indigenous Peoples and Chair of the Mechanism of Experts on the Rights of Indigenous Peoples, shown below:

Madam President,

I'm Lucas Artur Manchineri.

In reference to the traditional knowledge of the Indigenous Peoples, I, a representative of the Manxineru people, take this opportunity to declare the following:

For the Manxineru people, “nature” automatically builds itself constantly, and this movement has been going on for millennia. Living beings on the earth have life like any human. In the traditional knowledge of the Manxineru people, the land gives life to all the living beings that inhabit it and it always generates other lives. Forests too have their own lives—and there is the language of the land, trees, waters and animals.

Today, all these living beings and knowledge are being affected by humans with their deforestation and contamination of waters and the land.

In the governance of the Manxineru people, before contact with non-Indigenous people, the highest authority is the one who had full control of the community and social organization, which is reflected today in the way the Manxineru organize themselves. Authority was conferred on leaders and spiritual knowledge-holders, such as shamans.

Therefore, we the Manxineru people declare to the Brazilian State:

1. That traditional Indigenous knowledge is recognized as a valuable science that we can use for millennia and we want the Brazilian Ministry of Education to recognize these values of our collective.
2. That the laws of the state are implemented according to the Rights of Indigenous Peoples.
3. That the necessary actions are implemented for a specific and differentiated education.

4. That the Brazilian state recognizes and strengthens the traditional knowledge of Indigenous peoples.

Thank you, Madam President.

Lucas Artur Brasil Manchineri had first been chosen to be on the OHCHR Indigenous trainee program, and his trip to New York was financed by a non-governmental organization. During the period passed in the UN offices, he showed how in the Amazonian view humans and non-humans constitute a collective. However, it is necessary to point out that politics is an important issue here. Even at the international level, some nation-states worked more closely with the Indigenous representatives of the countries, and organized a meeting with their Indigenous delegations in these high-level meetings. Brazil did not offer such an encounter, but rather in its speeches talked about turning Indigenous territories into productive agricultural lands, and announced statistics about the crops produced.

Lucas has also noted in his speeches that many people blame governments, but they should instead look at big entrepreneurs and agribusinesses that ignore sustainable land use. Despite the difficulties, the Manxineru continue to take action, and at the end of 2020 they constructed a post to monitor the movements of the *Yine Hosha Hajene* moving ever closer to their settlements and established a group who were to be the responsible monitoring experts of the community. Among other things, these experts are knowledgeable in interpreting the movements and sounds of animals, such as birds, that signal the presence of people, and thus the community can be informed about the *Yine Hosha Hajene*'s movements.

Meanwhile, the Manxineru are searching for new knowledge to decide where to establish their hunting and planting areas, harvest their natural medicines, and find methods for protecting their sacred trees. They continue to learn from animals and plants, as they have since ancestral times, and continue to speak their own language. Their leaders say that in this effort and in their sustainable forest stewardship practices, they produce

both intergenerational ecological and intergenerational scientific knowledge. In fact, the Manxineru's enduring ecological knowledge was evident during the ongoing COVID-19 pandemic. They were largely self-sufficient in their territory, where they maintained social distancing. Yet, despite their deep ecological knowledge of their territory, they could not prevent the spread of the virus. Fortunately, in combating COVID-19, their ancestral knowledge of medicinal plants became noteworthy and effective.

The Future of the Indigenous Protected Areas in Brazil

The established actions for the *Yine Hosha Hajene* land protection showed the synergy of knowledges, interaction, and co-management. These were initiated by the Manxineru and Yine communities, who drew crucial attention to the increasing pressure of outsiders' economic activities on their lands, as they had detailed knowledge about what was happening on their lands. Eventually, Indigenous ideas, perspectives, and governance models have strengthened the mosaic of different conservation and Indigenous areas, beyond their borders. Interlinkages between different governmental and non-governmental institutions have been noted as crucial for effective communication and organization of actions.³¹

Yet, Indigenous knowledge and the contribution of Indigenous peoples to sustainability and biocultural diversity systems remained unrecognized at the highest political levels. Hence, the case of the Manxineru and the protection of their lands with governmental and non-governmental organizations showed how, despite engaging with knowledges coming from different sources and traditions and creating synergy,³² land protection is denied by political state decision-makers at implementation levels. Along with others, the Manxineru have been disappointed that even the satellite telephone and very high frequency (VHF) radio system, the only ways to communicate from Extrema village, are rarely fixed by the state, and thus the Manxineru have difficulty in

practicing agency in the land and life protection of their kin in voluntary isolation.

As has been argued, politics is the key for sustainability transformations.³³ In our case, land protection efforts of the Manxineru and Yine in Peru considered humans and the land in interaction. They gained the attention of the state and non-governmental actors, but transformative actions did not take place in practice because of the highest state leaders in government and the interests of economic exploitation aimed at immediate material profit-making. These agents have complex structures and especially the state can work differently at different levels.³⁴ Besides discussions on Indigenous knowledge in Indigenous Studies and social-ecological systems by ecologists, further studies are required in social epistemological approaches to pinpoint the best practices for the inclusion of Indigenous peoples and their knowledges at both state and federal levels. Indigenous traditional governance structures that include non-human actors could then become recognized in an integrated way by all governmental agencies, not only by its individual officers, as well as in political decision-making beyond national borders.

Agricultural industry and cattle ranching are occupying ever-more land in the proximity of the areas where the Yine, Manxineru, and *Yine Hosha Hajene* live. Their area is becoming increasingly surrounded by large-scale extractivist projects, with favorable connections to governmental authorities, and therefore their agency is limited. During the presidency of Jair Bolsonaro, illegal actions in Indigenous territories have been even more encouraged in Brazil, and increasing gold mining with its intoxicants and deforestation are causing brutal ecological disasters. This can irreversibly change the planet's climate. This is a vital issue for those actors who work to strengthen traditional and Indigenous knowledge and biocultural diversity in the Amazon.

Advancing social learning is elemental for better governance, and eventually to improve resilience capacity.³⁵ However, ignorance about and suppression of the Amazonian Indigenous population continues in multiple ways. Among others, in the COVID-19

situation, Indigenous organizations made strong claims that they had been ignored in the preventive actions. Furthermore, in April 2020, the governmental agency, FUNAI, gave new guidelines that all Indigenous lands that were waiting to be demarcated (over 200 territories) would be privatized and opened for exploitation. This was despite the global recognition that health and eco-catastrophes are closely interrelated. The future will show to what extent the lessons we have learned from our current health and environmental crises will be remembered.

Notes

- ¹ We would like to thank the Academy of Finland and the Faculty of Arts of the University of Helsinki for the funding, CPI-Acre for the long-term collaboration, and the editors of this volume for their comments and language editing.
- ² Shepard, "A Década do Contato," 556.
- ³ Albert and Ramos, *Pacificando o branco*.
- ⁴ See IPBES, *Global Assessment Report*.
- ⁵ Dowie, *Conservation Refugees*; Ostrom, "General Framework," 420.
- ⁶ Berkes, Colding, and Folke, "Introduction."
- ⁷ Berkes, *Sacred Ecology*, 198–202; Frey and Berkes, "Partnerships and Community-Based Conservation," 26–46.
- ⁸ See also Briggs, "Indigenous Knowledge," 231–43.
- ⁹ Laidler, "Inuit and Scientific Perspectives," 407–44; Patterson et al., "Exploring the Governance," 1–16; Tengö et al., "Connecting Diverse Knowledge Systems," 579–91.
- ¹⁰ Alcoff, "Race and Gender," 304–12; Fricker, *Epistemic Injustice*.
- ¹¹ Mignolo, *Local Histories/Global Design*.
- ¹² For more on the Manxineru in Brazil and Yine in Peru, see Opas, "Different But the Same"; Virtanen, *Indigenous Youth*.
- ¹³ Shepard and Torres, "Os povos isolados," 182–88.
- ¹⁴ FUNAI, "Povos Indígenas Isolados e de Recente Contato."
- ¹⁵ Chilisa, *Indigenous Research Methodologies*, 99; UN Human Rights Council, "Promotion and Protection," 15.
- ¹⁶ Berkes, *Sacred Ecology*, 7.
- ¹⁷ See, e.g., Fernández-Llamazares and Virtanen, "Game Masters," 21–27; Surralles and Hierro, *Land Within*; Virtanen, "Ancestors Times," 330–39.

- ¹⁸ E.g. Pärssinen et al., “Domestication in Motion.”
- ¹⁹ Virtanen, *Indigenous Youth*.
- ²⁰ Kröger, “Deforestation,” 464–82; Vadjunec et al., “Landuse/Land-Cover Change,” 249–74.
- ²¹ Berkes, “Environmental Governance,” 6; Ostrom, “General Framework.”
- ²² Almeida et al., *Gestão Territorial e Ambiental*, 66.
- ²³ Salic et al., “Tibetan Sacred Sites,” 693–706; see also Gulliford, *Sacred Objects and Sacred Places*.
- ²⁴ Manchinieri, Virtanen, and Ochoa, “Yine Manxinerune Hosha Hajene,” 48–49.
- ²⁵ Melo Silva and Ochoa, “Povos indígenas,” 157–61.
- ²⁶ Berkes, “Environmental Governance,” 6.
- ²⁷ Patterson et al., “Exploring the Governance,” 1–16; Ross et al., *Indigenous Peoples*.
- ²⁸ Virtanen and Honkasalo, “New Practices,” 63–90.
- ²⁹ Shepard and Torres, “Os povos isolados,” 189.
- ³⁰ Briggs, “Indigenous Knowledge,” 231–43.
- ³¹ Tsosie, “Climate Change,” 239–57.
- ³² Tengö et al., “Connecting Diverse Knowledge Systems,” 579–91.
- ³³ Patterson et al., “Exploring the Governance,” 1–16.
- ³⁴ See also Christensen and Laegreid, “Fragmented State.”
- ³⁵ Berkes, “Environmental Governance,” 1232.

Bibliography

- Albert, Bruce, and Alcida Ramos. *Pacificando o branco: cosmologias do contato no Norte Amazônico*. São Paulo: UNESP, 2002.
- Alcoff, Linda Martín. “Race and Gender and Epistemologies of Ignorance.” In *Routledge Handbook of Social Epistemology*, edited by Miranda Fricker et al., 304–12. London: Routledge, 2019.
- Almeida, Maria Ines, Maria Luiza Ochoa, and Renato A. Gavazzi. *Gestão Territorial e Ambiental da Terra Indígena Mamodate*. Rio Branco: Comissão Pró-Índio do Acre, 2016.
- Artur, Lucas Manchinieri, Pirjo Kristiina Virtanen, and Maria Luiza Ochoa. “Yine Manxinerune Hosha Hajene e a territorialidade criada na Terra Indígena Mamodate, Brasil—o poder das memórias.” *Tipiti: Journal of the Society for the Anthropology of Lowland South America* 16, no. 1 (2018): 42–51.

- Berkes, Fikret. "Environmental Governance for the Anthropocene? Social-Ecological Systems, Resilience, and collaborative Learning." *Sustainability* 9, no. 1232 (2017): 1–12.
- Berkes, Fikret. *Sacred Ecology*. New York, NY: Routledge, 2012.
- Berkes, Fikret, Johan Colding, and Carol Folke. "Introduction." In *Navigating Social-Ecological Systems: Building Resilience for Complexity and Change*, edited by Fikret Berkes, Johan Colding, and Carl Folke, 1–29. Cambridge: Cambridge University Press, 2002.
- Briggs, John. "Indigenous Knowledge: A False Dawn for Development Theory and Practice?" *Progress in Development Studies* 13, no. 3 (2013): 231–43.
- Chilisa, Bagele. *Indigenous Research Methodologies*. London: Sage, 2012.
- Christensen, Tom, and Per Laegreid. "The Fragmented State: The Challenges of Combining Efficiency, Institutional Norms and Democracy." Working Paper 3. Bergen: Stein Rokkan Centre for Social Studies, 2004.
- Dowie, Mark. *Conservation Refugees: The Hundred-year Conflict between Global Conservation and Native Peoples*. Cambridge, MA: MIT Press, 2009.
- Fernández-Llamazares, Álvaro, and Pirjo Kristiina Virtanen. "Game Masters and Amazonian Indigenous Views on Sustainability." *Current Opinion in Environmental Sustainability* 43 (2020): 21–27.
- Frey, James Barclay, and Fikret Berkes. "Can Partnerships and Community-Based Conservation Reverse the Decline of the Coral Reef Social-Ecological Systems?" *International Journal of the Commons* 8, no. 1 (2014): 26–46.
- Fricker, Miranda. *Epistemic Injustice: Power and the Ethics of Knowing*. Oxford: Oxford University Press, 2007.
- FUNAI. "Povos Indígenas Isolados e de Recente Contato." <http://www.funai.gov.br/index.php/nossas-acoes/povos-indigenas-isolados-e-de-recente-contato>.
- Gulliford, A. *Sacred Objects and Sacred Places: Preserving Tribal Traditions*. Niwot: University Press of Colorado, 2000.
- IPBES. "Global Assessment Report of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services," edited by S. Díaz, J. Settele, E. S. Brondizio, H. T. Ngo et al. UN-IPBES, 2019. <https://ipbes.net/global-assessment>.
- Kröger, Markus. "Deforestation, Cattle Capitalism and Neodevelopmentalism in the Chico Mendes Extractive Reserve, Brazil." *Journal of Peasant Studies* 47, no. 3 (2020): 464–82.

- Laidler, G. J. "Inuit and Scientific Perspectives on the Relationship between Sea Ice and Climate Change: The Ideal Complement?" *Climatic Change* 78, no. 2 (2006): 407–44.
- Melo Silva, José Frankneile de, and Maria Luiza Penedo Ochoa. "Povos indígenas em isolamento voluntário na fronteira Brasil-Peru: dinâmicas territoriais e ameaças." In *Cercos e resistências. Povos indígenas isolados na Amazônia Brasileira*, edited by Fany Ricardo and Majoi Fávero Gongora, 157–61. São Paulo: ISA, 2019.
- Mignolo, Walter. *Local histories/global designs: coloniality, subaltern knowledges, and border thinking*. Princeton, NJ: Princeton University Press, 2012.
- Opas, Minna. "Different But the Same: Negotiation of Personhoods and Christianities in Western Amazonia." PhD diss., University of Turku, Finland, 2008.
- Ostrom, Elinor. "A General Framework for Analyzing Sustainability of Social-Ecological Systems." *Science* 325, no. 24 (2009): 419–22.
- Pärssinen, Martti, Envandro Ferreira, Pirjo Kristiina Virtanen, and Alceu Ranzi. "Domestication in Motion: Macrofossils of Pre-Colonial Brazilian Nuts, Palms and Other Amazonian Planted Tree Species Found in the Upper Purus." *Environmental Archaeology* 26, no. 3 (2021): 309–322.
- Patterson, J., K. Schulz, J. Vervoort, S. van der Hel, O. Widerberg, C. Adler, M. Hurlbert, K. Anderton, M. Sethi, and A. Barau. "Exploring the Governance and Politics of Transformations towards Sustainability." *Environmental Innovation and Societal Transitions* 24 (2017): 1–16.
- Ross, Anne, Kathleen Pickering Sherman, Jeffrey G. Snodgrass, Henry D. Delcore, and Richard Sherman. *Indigenous Peoples and the Collaborative Stewardship of Nature: Knowledge Binds and Institutional Conflicts*. New York: Routledge, 2016.
- Salic, Jan, A. Amend, D. Anderson, K. Hoffmeister, B. Gunn, and F. Zhendong. "Tibetan Sacred Sites Conserve Old Growth Trees and Cover in Eastern Himalayas." *Biodiversity and Conservation* 16, no. 3 (2007): 693–706.
- Shepard, Glenn. "A Década do Contato." In *Povos Indígenas no Brasil 2011/2016*, edited by Fany Ricardo and Beto Ricardo, 556–59. São Paulo: Instituto Socioambiental, 2017.
- Shepard, Glenn H. Jr., and Luis Felipe Torres. "Os povos isolados na fronteira Peru e Brasil, com foco na região de Madre de Dios." In *Cercos e resistências: Povos indígenas isolados na Amazônia Brasileira*, edited by Fany Ricardo and Majoi Fávero Gongora, 182–88. São Paulo: ISA, 2019.

- Surralles, Alexander, and P. G. Hierro, eds. *The Land Within: Indigenous Territory and Perception of the Environment*. Copenhagen: IWGIA, 2005.
- Tengö, Maria, Eduardo S. Brondizio, Thomas Elmqvist, Pernilla Malmer, and Marja Spierenburgh. "Connecting Diverse Knowledge Systems for Enhanced Ecosystems Governance: The Multiple Evidence Based Approach." *Ambio* 43 (2014): 579–91.
- Tsosie, Rebecca. "Climate Change and Indigenous Peoples: Comparative Models of Sovereignty." *Tulane Environmental Law Journal* 26, no. 2 (2013): 239–57.
- UN Human Rights Council. "Promotion and Protection of the Rights of Indigenous Peoples with Respect to Their Cultural Heritage." Study by the Expert Mechanism on the Rights of Indigenous Peoples, August 19, 2015, 15.
- Vadjunec, J. M., C. V. A. Gomes, and T. Ludewigs. "Land-use/Land-cover Change among Rubber Tappers in the Chico Mendes Extractive Reserve, Acre, Brazil." *Journal of Land Use Science* 4, no. 4 (2009): 249–74.
- Virtanen, Pirjo Kristiina. "Ancestors' Times and Protection of Amazonian Biocultural Indigenous Heritage." *Alternative: International Journal of Indigenous Peoples* 15, no. 4 (2019): 330–39.
- Virtanen, Pirjo Kristiina. *Indigenous Youth in Brazilian Amazonia: Changing Lived Worlds*. New York: Palgrave Macmillan, 2012.
- Virtanen, Pirjo Kristiina, and Marja-Liisa Honkasalo. "New Practices of Cultural Truth Making: Evidence Work in Negotiations with State Authorities." *Anthropology of Consciousness* 31, no. 1 (2020): 63–90.