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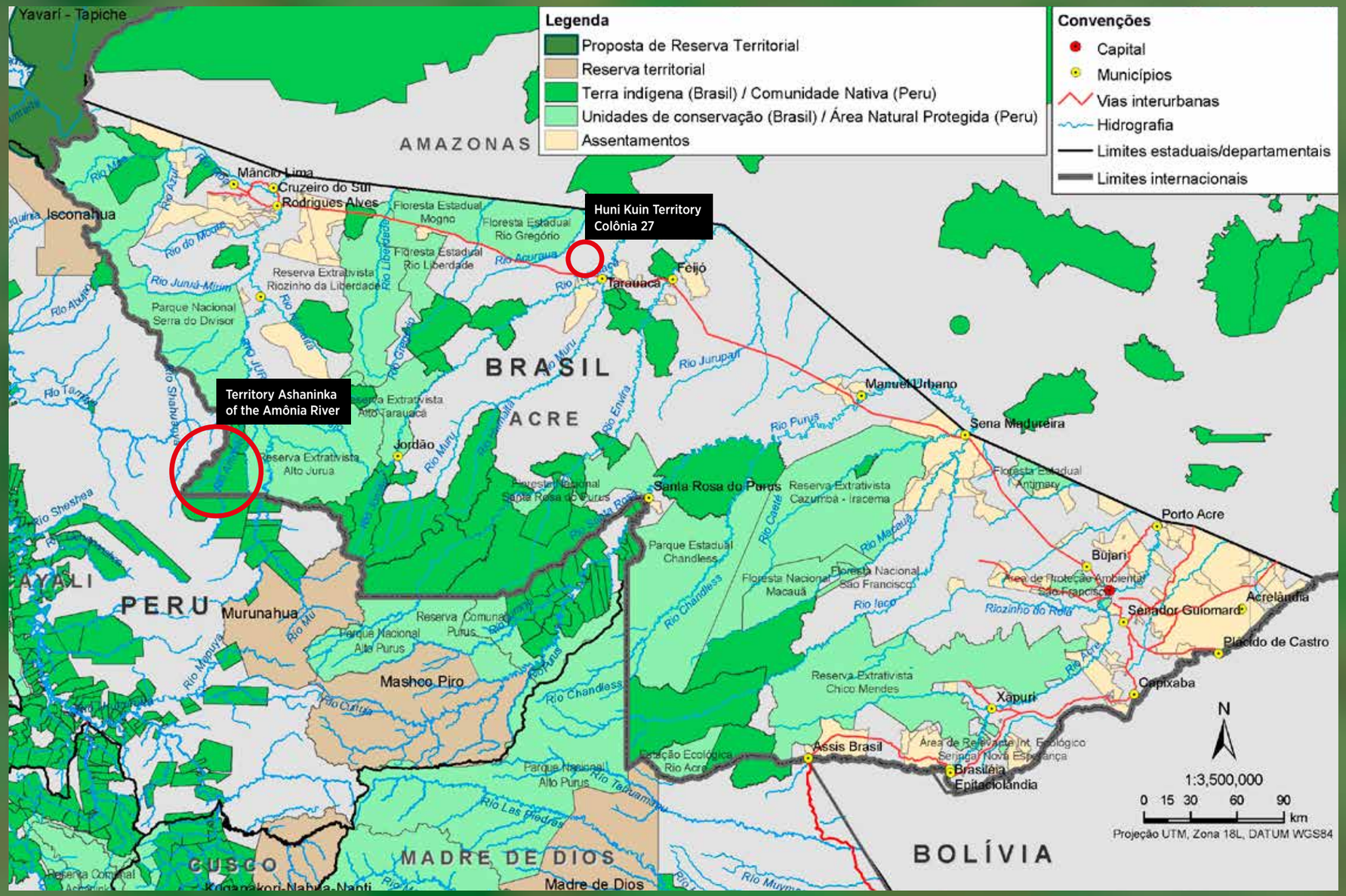
Sustainable rainforest management

Local initiatives meet supporting policies in Acre, Brazil



Acre covers an area of 164 124 km2. Almost half of it (45.8%) is categorized as protected area. Of this, almost 22% are reserves for sustainable use, near 10% strict conservation areas and 14.5 % indigenous lands.
Source: Governo do Estado do Acre Acre em Números 2017, table 12. Map: CPI Acre/RFN.

Foreword

Rainforests are unique, irreplaceable, vital ecosystems under immense pressure in all regions of the world. They play an extremely important role in protecting biodiversity, curbing climate change and stabilizing local and regional rainfall and precipitation patterns. Locally, the rainforest provide food, shelter and income, as well as cultural and spiritual space, for millions of indigenous peoples and other forest-based communities.

The aim of the report is to point to possible solutions to the challenge of conserving forests while improving living conditions and facilitating development for indigenous peoples and forest communities. This is at the core of Rainforest Foundation Norway's approach to rights-based sustainable rainforest management.

Rainforest Foundation Norway (RFN) has for many years been cooperating with indigenous peoples and Brazilian civil society ally Comissão Pró-Índio do Acre (CPI-Acre) on rights-based socio-environmentally sustainable forest management in Acre. This report is based on wider experiences from their work in Acre, not only on what has been supported by RFN. It is written by RFN staff and based on a field visit to Acre in 2015, long term experience as well as reports and articles.

It would not have been possible to make this report without the hospitality of the people in the indigenous territories of the Ashaninka of Amônia River and Colônia 27, and the logistical support from CPI-Acre.

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Rainforest Foundation Norway (RFN) works to protect the world's rainforests and secure the rights of indigenous peoples and forest peoples. RFN collaborates with more than 70 local environmental, indigenous and human rights organisations in 11 rainforest countries in the Amazon, Southeast Asia, Oceania and Central Africa.

In Norway, we work to promote policies that are consistent with rainforest protection, and to promote awareness among the business sector and the public of the impacts of their investments, activities, and consumption pattern on the rainforest and its peoples.

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Cover photo: Ellen Hofsvang. Claudio mending fishing nets in Apiwtxa

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Executive summary

– We could get a substantial amount of money if we cut the valuable trees in this forest. But what would that leave for the next generation? Benki Piyāko explains how the Ashaninkas of the Amônia river have quite different plans for their future. They will not log their territory's forest, but manage it by investing in production from its renewable resources, their village gardens and orchards. On the terrace behind him two hammocks are swaying slowly, as a couple of young girls follow our conversation. Around the village is the Amazon rainforest, where the Ashaninka territory stretches as far west as to the Peruvian border.

Experiences and management strategies from the indigenous territories of the Ashaninka of the Amônia river and the Huni Kuin territory titled Colônia 27 in the Brazilian Amazon form the basis for this report. Such examples should also be at the core of international strategies to reach the UN's sustainable development goals for 2030 (SDGs). The goals highlight how human development, health and welfare are interlinked with our ability to safeguard ecosystems. One of the targets under the SDGs is to halt deforestation. Finding management strategies which maintain the rainforest ecosystem, with its biodiversity and the services it provides to people and the planet, is essential to achieve the goals.

The territories described in this report lie in the Brazilian state of Acre. Here, local communities and the state government have worked together since the 1990s to find workable forest management strategies which both safeguard the rainforest's ecosystem services and secure forest peoples' rights and livelihoods. This has resulted in what is called '*florestania*', or the state's "forest-based development" policies. The basic idea is that standing forests are one of the state's great assets and they should be managed for long term sustainability, as a basis for development. Acre state is home to 15 different indigenous peoples and various other forest dependent peoples. In the experiences described in this report, it is striking how closely management of land and natural resources is linked with and formed by history, culture and identity. Hence, forest management strategies must be well adapted to varied social and cultural circumstances.

In spite of the great variations in context, culture and history in rainforest countries, there are some general lessons learned in Acre which we think are useful for other efforts towards rights-based sustainable rainforest management:

Recognition of indigenous land rights has been a prerequisite for sustainable forest management and development, as well as for strengthening of culture and identity. In Acre, land tenure regularization and recognition of indigenous territories from the 1990s and onward have changed the profoundly unequal distribution of land. It has enabled indigenous peoples to exercise better control of their territories and also to recover lost forest lands in an impressive manner. The territories of the Ashaninka of the Amônia river and the Huni Kuin in Colônia 27 are illustrating examples. The communities have been planting local tree species, forbidding the commercialization of hardwood, regulating the collecting of river turtle eggs, and banning fishing and hunting in specific areas to protect the species. In both cases, securing and restoration of forest lands have gone hand in hand with a strong emphasis on traditional culture and indigenous identity, strengthening the communities internally and facilitating joint action.

Collective rights to land have also enabled the communities to plan and act for the future. Based on secure land rights, and in order to meet the demands of a growing population in the limited territories with fixed borders, local communities

have also established new ways of resource use, such as fish farming and agro-forestry systems. New ideas are put forward and implemented, based on increased security of land and resources, traditional knowledge and local needs, as well as the ability to make the best out of external input and opportunities.

Besides land tenure regularization, **land-use planning has been central** to Acre's forest maintenance policies. With Acre's state wide Plan for Ecological and Economic Zoning, land-use activities are regulated and restricted. Public institutions, such as the State Environmental Department, have together with smallholder communities and indigenous associations conducted participatory mapping and prepared the implementation of Community Development Plans and Territorial and Environmental Management Plans. The maps and management plans cover a wide range of issues and have, being elaborated by the communities themselves, become recognized as legitimate tools for managing the territories.

Environmental education has been conducted among indigenous peoples, combining indigenous knowledge with information about alternative sustainable management practices for forests, such as agro-forestry systems. Dedicated "forestry agents", many of them local representatives trained in agroforestry and other relevant skills, have played a key role in regeneration and recovery of forest landscapes.

Another important element has been the state's **support of initiatives for improved livelihood for the people in the forest**. Acre has developed a System of Incentives for Environmental Services aiming to generate income from the environmental services of the forest. The system seeks to reward indigenous peoples, as well as other forest peoples, for conserving the forest. It also promotes technical assistance and funding to improve access to markets for community products. Both the Ashaninka and the Huni Kuin now sell produce from the forest to the local schools for their meal service. The Ashaninka village won the tender for delivering food for the school in competition with strong, commercial external actors.

Acre's forest-maintenance development policies have achieved remarkable results with broad local involvement. Communities such as the Ashaninka of the Amônia river have been able to take real ownership of the planning process, calibrating government policies with local realities and using local knowledge to plan according to local needs.

However, such achievements need long term support and engagement, **where participation must be considered a continuous process**. Real participation lead communities to consider the management plans their own, not something created by an outside government. When there is lack of participation in finalizing, prioritizing and implementing the management plans, the result is often not sustainable management of forests, something which is also illustrated by examples in the report.

Securing sustainable forest management while improving livelihoods is a complex task. There is a need for **coordination of various policies and initiatives, since what happens in surrounding areas strongly impacts** the biodiversity and the possibilities for sustainable management also within the indigenous territories. Indigenous territories must be seen as part of the larger surroundings, and programmes that can ensure the well-being of neighbouring indigenous and non-indigenous populations together have to be developed.

Insecurity undermines sustainable development; recognition of indigenous territories must be followed by protection against illegal invasions. In the border regions, networks of illegal logging and drug trafficking control large areas. Indigenous people face harassment; even direct death threats. The criminal gangs consider the organized management of the territories as a challenge to the lawlessness they depend on, both for smuggling drugs and for illegal logging. Without proper government enforcement against illegal logging and drug trafficking, the local peoples experience great insecurity, which severely restrict the possibilities for the sustainable management of indigenous territories.

Although there are still some challenges to be met, the interaction between local engagement and government support mechanisms has led to impressive results in Acre. Back in the Ashaninka territory, the impacts are clearly visible. In school, children get fresh and healthy food from their families' and kin's gardens. The community gets income from the government funding for school meals, and the village cooperative is ready to expand its activities to create new income from the territory's natural resources – while leaving the valuable rainforest for coming generations.

1. Introduction

Our knowledge about the rainforests' vital importance for development, climate change, rainfall and food production is increasing. Still, the remaining rainforests continue to shrink in all tropical regions. There is an urgent need to find new solutions to forest management which can halt this deforestation and at the same time maintain the rainforest ecosystem services necessary for local development. Indigenous peoples' collective management of land have proven to be an effective barrier to deforestation, but what conditions need to be in place for the communities to implement sustainable management practices? Which policies or other incentives could support forest dwellers in making a living in the forest, without burdening the ecosystem over its capacity? These were some of the questions we wanted to address in this study.

The Brazilian state of Acre, located in the far western periphery of the Brazilian Amazon and bordering Peru, proved an interesting case. Acre state is home to 15 different indigenous peoples and various other forest dependent peoples. The state is still largely forested. What is really unique in Acre is that local communities and the state government have worked together since the 1990s to find workable forest management strategies which both safeguard the rainforest's ecosystem services and secure forest peoples' rights and livelihoods. They have developed what is called *florestania*, or "forest-based development". The basic idea is that standing forests are one of the state's great assets and they should be managed for long term sustainability, as a basis for development. This idea was a response to increasing deforestation of the previous decades, as well as a result of social protests of forest dependent communities. The various policies and measures will be discussed in **chapter 2**.

How these policies play out in reality depend greatly on the communities, and their cultural and historical context. To show the importance of local participation and adaptation of policy tools and measures, we chose to look at two very different communities for this report: The territory of the Ashaninka of the Amônia River and the Huni Kuin territory Colônia 27, presented in **chapter 3**. Size and location strongly influence the opportunities and challenges for sustainable management. The territory of the Ashaninka of the Amônia River is a rather large area bordering Peru (875.7 km^2), located several hours by boat from the nearest road and town. The Ashaninka living here have close links to the Ashaninka on the Peruvian side of the border. In contrast, the Huni Kuin (also referred to as Kaxinawa) territory Colônia 27 is the smallest in Acre (3.05 km^2), and it is situated along the main highway east-west in Acre, the road connecting the capital Rio Branco and the western town of Cruzeiro do Sul.

Chapter 3 also explores the importance of local participation processes, how that enhances legitimacy and local agency, allowing local communities themselves to exercise territorial control, create their planning instruments and design policies. We show examples of how initiatives from active local communities, combined with supportive public programs, shape sustainable solutions in this part of the Amazon rainforest.

In Chapter 4 we discuss the challenges that still remain. The local participation so essential for the success of long term sustainable solutions has often proved difficult to sustain over time. There is also a lack of coordination both between national and state policies, and a need to coordinate the different actions and policies that target indigenous territories, conservation areas and colonization settlements. Even though land rights are secured to a significant degree in Acre, there is an urgent need to secure those rights from invasive pressure, especially along the border between Brazil and Peru. The extremely different forest governance regimes in Peru and in Brazil and the lack of government enforcement creates severe security challenges and endangers the achievements both of the state of Acre and the local populations.

Although Acre's *florestania* policies are not perfect, a lot has been achieved with the combination of rights and local decision-making, working in pair with supportive state policies. Therefore, we insist that Acre's efforts to implement a forest-based development strategy are worth investigating for anyone looking for sustainable development solutions, whether through aid, payment for ecosystem services such as REDD+, or commercial investments. In the concluding **chapter 5** we highlight some lessons learnt from the unique efforts by community organisations and the government of Acre.

2. Acre's forest-maintenance policies

Forests are of crucial importance for rural livelihoods in Acre. The forest cover in the state is 86%, one of the highest in Brazil, and people rely heavily on a wide range of forest products and types of forest income.[1] Since 1999, Acre has had ambitious forest maintenance policies, which have had remarkable effects. In 2004, the state had a deforestation rate of 728 km^2 per year. By the time of the research for this report in 2015, this had been reduced to 264 km^2 per year, a reduction of 64%, enhancing also biodiversity protection and ecosystem integrity[2]. At the same time, production and state GDP per capita has increased[3]. Acre's efforts to craft a development path based not on the conversion of forests to pasture and agriculture, but on the sustainable use of its forests, is the main focus of this chapter.

Forest-based development policy: A response to increased deforestation

The importance of forests, strong commitment to involvement of local communities, combined with recognition of and respect for cultural diversity and local knowledge are core aspects of Acre's pioneering policies[4], often referred to as *florestania*[5]. Although there are shortcomings (which we will discuss later in this report), there is a lot to learn from the approach chosen by the state of Acre.

Two central pillars in the *florestania* policy are on the one hand Acre's territorial and environmental policies and, on the other, its cultural and social equity policies. The latter entails respect for cultural diversity and ensures that indigenous and other traditional populations have access to resources they depend on to maintain their livelihoods. Building on these policies, Acre has developed a system of incentives for environmental services known as SISA, recognized as the most advanced subnational programme of its kind worldwide.[6] We will take a closer look at SISA later in this chapter, but first some background information on the development of Acre's forest maintenance policy.

The *florestania* policy was developed in the

1990s as a joint response from Acre's social movements and the state government to the increasing deforestation and forest degradation, and its ensuing negative effects for forest-based livelihoods. From the 1970s Acre had experienced an expansion of cattle ranching and rapid conversion of forests to pastureland. Throughout the 1980s and 1990s, illegal logging had increased sharply, representing the vast majority of all logging activity. The construction of two federal highways through the state of Acre[7] had brought waves of immigration, followed by increased deforestation. Communities whose livelihoods depended on forests were losing their lands. In 1988, the famous rubber-tapper activist Chico Mendes was killed after years of campaigning for forest protection and respect for the rights of Acre's forest peoples.

In response to these developments, grassroots movements representing rubber-tappers and indigenous communities formed *The Alliance of Forest Peoples* in 1989. Based on the movement's innovative tenure proposals, the state of Acre established the Extractive Reserve category (*Reserva Extractivista*, widely known as RESEX).[8] The purpose of an extractive reserve is to secure the rights of forest-dependent communities, such as rubber-tappers and gatherers of Brazil nuts, to the forest areas where they traditionally live.

At the same time, the recognition and titling of indigenous lands constituted an important step for securing territorial rights for Acre's indigenous peoples. Today, the majority of indigenous territories in Acre – 26 out of 36 – are fully titled and recognized, and the remaining 10 are in various stages of the process.[9] With the establishment of extractive reserves, titling of indigenous territories and delimitation of other conservation areas, 47% of Acre's land area have been brought under some form of environmental protection. This has created an important corridor of forests along the border with Peru.

Land-use planning and local engagement

Besides land tenure regularization, land-use planning[10] has been central to Acre's forest maintenance policies. Particularly important is the Plan for Ecological and Economic Zoning (ZEE)[11], a land-use plan for the entire territory of Acre. The ZEE plan is part of the state's Integrated Environmental Management Project (PGAI), and encapsulates the vision of Acre's forest governance: a sustainable development that combines forest conservation and social justice, built on local cultural history and ecology.[12] It divides Acre into four zones where land-use activities are regulated and restricted.

FACT BOX:

The Plan for Ecological and Economic Zoning includes four zones:

- Zone 1: Consolidated Production Systems (24.7%) includes agricultural production, cattle ranching and fish farming;
- Zone 2: Areas of Sustainable Use of Natural Resources and Environmental Protection (49%) includes indigenous territories, forest production for timber and other forest products;
- Zone 3: Areas for Land-use Definition (26.2%), including areas where indigenous peoples have traditional rights;
- Zone 4: Urban Centres (0.2%).

Source: Governo do Estado do Acre 2010

The plan combines overarching land-use planning at the state level with zoning and management planning of forest areas at the local level. From 2004, smallholder communities and indigenous associations have conducted participatory mapping, ethno-mapping, and ethno-zoning[13] in partnership with non-governmental organizations such as Comissão Pró-Índio do Acre (CPI-Acre) and with public institutions such as the State Environmental Ministry (SEMA). These exercises have prepared the implementation of Territorial and Environmental Management Plans (PGTA) in indigenous peoples' territories and Community Development Plans (PDC) in other protected areas. These processes and plans have become part of public policies.

Strong local commitment and participation have been particularly significant[14] in the indigenous territories where the indigenous groups participated in the mapping, zoning and development of management plans. Today, all 36 indigenous territories in Acre have maps and management plans in various stages of implementation, reflecting each group's cultural and social realities.

Getting ready for a traditional celebration in territory Colônia 27

FACT BOX: Territorial and Environmental Management Plans (PGTA)

All indigenous territories in Brazil are expected to develop and implement Territorial and Environmental Management Plans (PGTA). These plans are officially recognized under Brazils National Policy on Territorial and Environmental Management of Indigenous Lands (PNGATI), decree 7747 from 2012. This Policy aims at guaranteeing and promoting the rehabilitation, conservation and sustainable use of indigenous land and territorial natural resources, insuring the integrity of the indigenous land property, the improvement of the quality of life and the whole conditions of physical and cultural reproduction for present and future generations of indigenous populations, respecting their sociocultural autonomy.

The PGTAs reflect the Indigenous Peoples' specific visions for their lands. They usually cover three main priorities:

1. Territorial control and protection, including indigenous-led surveillance and monitoring practices.
2. Sustainable management of natural resources for the promotion of food security and income generation, as well as conservation, restoration and sustainable land use.
3. Capacity building and institutional strengthening for local organizations.

Through the PGTA process, the indigenous community agrees on its shared values and priorities, develops mapping and monitoring capabilities within its own community, builds an understanding of the relevant government programs available to them, strengthens their internal organizations for dealing with outside interests in their territory, and forms binding internal agreements about how to develop (and conserve) their territory to create the future they want for themselves and the generations to come.

The management plans cover topics such as forest and flora resources, hunting, fishing, management and breeding of wild and domestic animals, organization of the villages, environmental health, waste and sanitation, water resources, surveillance and inspection, culture, intercultural bilingual differentiated education, protection of un-contacted Indians, climate change and environmental services, bio-piracy and revision of boundaries of indigenous lands.

Source: http://www.fao.org/faolex/results/details/en/?details=LEX-FAOC120048 and https://www.nature.org/ourinitiatives/urgentissues/land-conservation/indigenous-environmental-and-territorial-plans.pdf

THE INDIGENOUS PEOPLES IN ACRE: 15 different indigenous peoples, in addition to three groups in voluntary isolation, live in the state of Acre. They number approximately 19,600 persons, constituting 2.7% of Acre's total population and 9.7% of its rural population. These figures do not include individuals living in cities or the groups in voluntary isolation. FUNAI estimates the number of indigenous peoples in isolation to 600.
Source: http://www.agencia.ac.gov.br/acre-concentra-vasta-diversidade-de-povos-indigenas/

Kenashe and Eriki painting traditional Ashaninka patterns. Textiles are sold in the Apiwxta cooperative.

Forestry agents

Parallel to state initiated planning, the NGO CPI-Acre has conducted environmental education among indigenous peoples, combining indigenous knowledge with information about alternative sustainable management practices for forests, such as agro-forestry systems. As early as 1991, CPI-Acre started the training of Indigenous Agro-forestry Agents[15]. Indigenous students, selected by their own communities, receive training in agro-forestry systems and sustainable management practices before they graduate as agro-forestry agents. The agro-forestry agents have become key actors in systematizing local knowledge about their own people's resource usage, as well as helping pinpoint the environmental challenges affecting the demarcated territories. The training of agro-forestry agents has been very important for Acre's indigenous peoples, as shown in both cases in this report. Today, the agro-forestry agents[16] are important human resources for the implementation of environmental policies in the indigenous territories, and training of such agents is included also in other government programs. Still, as we discuss later in the report, the agro-forestry agents could have been even more important if they were officially recognized or financed by the state government, as this would give them a more influential role in the implementation of management plans.

Investments in small scale business

The Acre government had by 2015 invested approximately USD 4.5 million in implementation of the territorial and environmental management plans in indigenous territories.[17] Activities supported have been related to territorial and environmental management, training and education, and strengthening indigenous identity and culture, as well as the development of the communities' organizational capacities. The government has also supported the initiation of new productive activities such as fish and poultry farming, and reforestation and plant diversification in cultivated areas. Linked to the environmental management plans, the state government has also initiated a series of economic incentive programmes aimed at small-scale production based on agricultural products while protecting standing forests. Regarding those living in the extractive reserves, riverine populations and small farmers, the state has invested in public–private enterprises aimed at establishing productive chains for forest products to ensure production and commercialization. One of the most successful and best-known initiatives is Natex, a condom factory supplied with natural rubber from organized rubber-tappers who are members of the Cooperacre network of cooperatives. Cooperacre sells 100 million condoms to Brazil's National Health Agency, making rubber-tapping economically viable for local communities.[18]

Acre's System of Incentives for Environmental Services

Indigenous and non-indigenous organizations and communities have continued to press for state support for establishing and strengthening production value chains for forest products. These demands have influenced the development of the System of Incentives for Environmental Services (SISA). SISA promotes territorial planning, environmental compliance and equal benefit sharing with the aim of reinforcing the overarching territorial, environmental and social policies of Acre.

SISA passed into law in 2010. Like Acre's Plan for Ecological and Economic Zoning (ZEE), SISA targets the state of Acre as a whole. SISA was developed through a broad consultation process and aims to generate income from the multiple values and environmental services of Acre's forests. Its land-use planning strategy aims to fulfil the titling of customary landholdings. Acknowledging Acre's cultural diversity, SISA proposes differentiated strategies for forest-dependent communities and smallholders to strengthen their livelihoods.

Rewards forest peoples for conservation

To prevent low-deforestation areas from turning into areas with high risk of deforestation, SISA seeks to reward indigenous peoples, extractive reserve and riverine populations for having conserved forest. To promote the adoption of more sustainable practices among smallholders, a program for certification of properties was introduced. [19] SISA also promotes technical assistance and funding to improve access to local and regional markets for community products.[20] Indigenous representatives, NGOs and civil servants alike highlight Acre's pioneering forest maintenance policies and the achievements on state-wide and local levels. As one interviewee put it, 'we are on the right path.' However, they also are well aware of the need to reinforce implementation of these policies.

FACT BOX: SISA

With its jurisdictional approach, SISA is considered the most ambitious and comprehensive initiative for environmental regulation in Brazil. It is also the only forum in which indigenous peoples have a guaranteed voice, to monitor and influence the distribution of resources. The challenge is to guarantee a "qualified participation" of the indigenous peoples in this discussion.

SISA focuses on the conservation and recuperation of seven ecosystem services:

- carbon sequestration and improvement of carbon stocks through forest conservation and management;
- natural scenic beauty;
- socio-biodiversity;
- water and hydrological services;
- climate regulation;
- valuation of cultural diversity and of traditional ecosystem knowledge;
- soil conservation and recuperation.

Source: Governo do Acre: Sistema de Incentivo a Serviços Ambientais http://www.ac.gov.br/

Policies create opportunities

Aside from the case of unclear land tenure of non-designated federal land and some cases where indigenous territories overlap with conservation areas and colonization settlements, Acre's land-tenure regularization and zoning have made good progress. In close coordination with social movements, Acre's government – in three successive periods – accorded priority to coordinated territorial, environmental and social equity policies. These policies have created important opportunities at the local level. We will have a closer look at how this happened in the following chapter.

3. A building block for sustainability: Indigenous Territories

The indigenous territories in Acre cover 14.5%[21] of the state's territory and show low rates of deforestation, accounting for barely 1% of deforestation in the state from 2004 to 2015.[22] These rates support increasing evidence from Brazil's Amazon: legally recognized indigenous territories serve as effective barriers to deforestation. This chapter documents how the territories may also contribute to *maintaining* and *restoring* forest biodiversity.

The two indigenous territories visited for this report differ enormously in size and characteristics: the territory of the Ashaninka people of the Amônia River, an area of 872.05 km², mostly standing forests; and Colônia 27, Acre's smallest indigenous territory, with barely 3.05 km², of which only 18% is forested,[23] home to the Huni Kuin people, also known as the Kaxinawá.

Even though these territories are quite different physically, historically and socially, both cases show how land titling has contributed to empowering indigenous populations and ensuring their livelihoods. However, the formalization of the territories has also imposed new constraints and created new challenges. Tackling these issues requires broad local participation in the development of territorial management. How the challenges are to be met depends on the histories, experiences and expectations of the people who live in the territories.

Case 1: The Ashaninka of the Amônia river

An essential contribution to securing the Ashaninkas' livelihood was the creation of the territory

Dona Piti, Apiwxta.

Kampa do Rio Amônia in 1992. Although created on only a part of the vast areas in the border region with Peru occupied by the Ashaninka, the demarcation and formal recognition has given them the opportunity to exercise control over that area.

As they highlight when telling their history, the Ashaninka have been active in the development of Acre's forest policies, and have used these policies to meet new challenges, as well as to define their priorities for maintaining and re-creating the biological richness of their territory, which they see as the foundation for the well-being of their people.

"We decided to live together"

The indigenous territory of the Ashaninka of the Amônia river was formally recognized in 1992, after a seven-year process of identification of the areas inhabited by the Ashaninka, and with collective discussions about where to define its borders.[24] The following year, the Association for the Ashaninka of the Amônia River - Apiwtxa was officially registered, two years after it was formed in 1991. At that time, the Ashaninka were living in dispersed settlements along the Amônia and its tributaries in the Brazilian borderlands. Three years after the territory was recognized, in 1995, the Ashaninka of the Amônia river decided to found a village also named Apiwtxa, where most families could live together (the name translates as 'all together', 'all united').[25] The aim was to strengthen the Ashaninkas' possibilities of defending their territory and their culture when confronted by outside influences and threats. However, the new settlement was to have unforeseen consequences, as the story of Dona Piti, one of the founders of Apiwtxa, shows.

Twenty years ago, she and her family lived near the Upper Amônia river, in a lovely place, where all kinds of forest game and fish were plentiful, and her gardens were close to the house. It was easy for the women to maintain a garden and gather its products, easy for men to hunt and fish. No one needed to walk for hours in search of food. When there was no territory with fixed boundaries, when they lived more scattered, people were also more mobile. They did not stay in only one place; children would travel with their families and learn about the forests' plants and animals. Dona Piti's daughter, Dora, still recalls how these trips taught her to attend to the sounds and smell of the forests and rivers, and the movements of fish in the rivers and animals in the forest; how she learned to recognize the streams and rivers that cross their lands. In contrast, in Apiwtxa where most of the Ashaninka of the Amônia river now live, family gardens can no longer be located near to each house.[26] Women have to walk long distances, spending the entire day away from home; and game is no longer easy to find nearby, although the people of Apiwtxa have done much to deal with overfishing of nearby lakes and rivers. The village school includes traditional knowledge about forests and gardens in the syllabus, but the children have no longer the experience of travelling around, as their parents and grandparents used to do.[27]

Despite these changes, the establishment of the indigenous territory and the Apiwtxa village was crucial for breaking out of the cycle of indebtedness and enslavement systems in which the Ashaninka had been enmeshed since the 1970s, when Brazilian loggers and fur hunters begun arriving in the area. As Dona Piti remembers, it was not unusual to see, in one day, two or three canoes full of dead game heading for the nearest city, Marechal Thaumaturgo. The demand for hardwood like mahogany and cedar increased, and these species were almost depleted. Her memories are backed up by written documentation. During the 1980s, when the number of loggers and fur hunters peaked, companies from Cruzeiro do Sul used bulldozers and tractors to create an extended network of logging roads in the area.

Almost one fourth of the lands the Ashaninka inhabited, which at that time were untitled, was affected. As the demand for hardwood increased

THE ASHANINKA IN BRAZIL: The Ashaninka constitute one of the largest indigenous groups of the Amazon, with an estimated population of approximately 100 000 individuals, of which only relatively few live in Brazil. The Ashaninka now inhabit a fragmented territory spanning from the Selva Central region of the eastern slopes of the Peruvian Andes to the Upper Juruá basin.

The Ashaninka in Brazil are currently living on the upper Juruá, along the Amônia, Breu and Envira rivers and the Primavera stream. The history of Ashaninka occupation of this region is difficult to establish with precision. Some Ashaninka families have lived on the Amônia since the 1930s, and there are kinship ties linking the Ashaninka of the Amônia to those located both in Peruvian territory and in other Brazilian locations.

According to the Ashaninka organization Apiwtxa, approximately 800 people live in the territory Kampa do Rio Amônia in Acre, Brazil. This territory borders to the west and south with Peru, and to the north with the Indigenous Territory of the Arara of the Amônia River and the Extractive Reserve of the Upper Juruá.

Sources: Pimenta, 2013, Apiwtxa http://www.apiwtxa.org.br/os-ashaninka-do-rio-amonia/ and Instituto Socioambiental https://pib.socioambiental.org/en/povo/ashaninka/146

The village school plays an important role in Apiwxta development plans. The school was closed today, but school-books are open.

Learning from the elders; arrows are prepared for hunting, Apiwxta.

and the supply diminished, the enslavement system tightened. Traders and patrons paid little for the forest products they bought from the Ashaninka, but charged high prices for the manufactured products they sold back to them, creating enormous debts which were difficult to repay. The Ashaninka were then obliged to work for traders and patrons under harsh conditions.[28]

When the Ashaninka gained formally recognized rights to their territory, and with the foundation of the Apiwtxa village, they could demand and exercise territorial control, halt the trade in hardwood, furs and game, and break out of their debt-based relations. The village had been established near the borders of the Territory of the Arara of the Amônia river and the Extractive Reserve of the Upper Juruá. This location allowed the villagers to monitor the people entering into their territory, something important to avoid the invasion of illegal loggers and drug traffickers, as will be discussed in the next chapter. With title in hand, they could also demand the intervention of federal and state authorities to control territorial invasions. Moreover, the creation of the village made possible the organization and functioning of a sales cooperative through which they could sell their products, and buy the manufactured goods they needed with the money earned. This cooperative was initially supported by FUNAI.

The Ashaninka of the Amônia river also established direct relations with state-level institutions to address a major concern: The management of their newly demarcated territory.

Managing the territory

The trade in hardwood, furs and game during the 1970s and 1980s, together with the initial expansion of cattle ranching, had left extensive degraded and polluted areas and streams within the lands of the Ashaninka of the Amônia river. Following the titling of their territory, a priority for the Ashaninka was the restoration and recovery of threatened species – trees, palms, fish and certain other animals. Their engagement was strengthened by Acre state policies which supported the mapping and development of management plans in indigenous territories, as part of the state's Plan for Ecological and Economic Zoning (ZEE) and later on the national policy on Territorial and Environmental Management of Indigenous Lands (PNGATI). It also coincided with the work of NGOs like Comissão Pró-Índio do Acre (CPI-Acre) which was, and still is, involved in indigenous education.

Some years after the territory was formally recognised in 1992, the people of Apiwtxa engaged in discussions and rulemaking processes regarding their territory's resources. Isaac Piyãko Ashaninka[29], head of the Apiwtxa school, explains:

We decided to create a reserve area where hunting would be forbidden, imposed restrictions on using hunting dogs in some other areas. We realized the importance of restricting the hunting of the *tracajá* (a tortoise species) and building up the population. We also started planting hardwoods and other tree species in areas previously used for pasture. We wanted to have enough resources for our people, and to take care of the resources we had in our forests.[30]

These decisions were central when the Ashaninka started developing an Environmental and Territorial Management Plan (PGTA) of their territory in 2004, supported by the Acre State Environmental Department and carried out by Apiwtxa in cooperation with the Comissão Pró-Índio do Acre.

The PGTA was developed in a participatory way. In meetings with women, young people, traditional leadership, shamans and others (e.g. teachers, midwives, health/sanitation/ agro-forestry agents), the Ashaninka worked out a series of maps on the basis of existing knowledge among the people. The maps showed various types of vegetation, animal species and habitats, the flow of game, and fish habitats, including endangered species. The Ashaninka identified trees and plants used as food, medicine, and as material for houses, for bows and arrows, and a wide range of handicrafts.

The plan also pinpointed major challenges: How to produce enough food for a growing population without causing deforestation and loss of biodiversity? Also, the persistent invasions of illegal loggers coming from Peru were singled out as a main threat to forest integrity.[31]

The Ashaninka established norms which defined areas of refuge, specific periods and permitted ways of conducting hunting and fishing, as well as provision for systems of agroforestry which combined native and introduced fruit trees, timber forests, medicines, vegetable and ornamental species. Also included were measures like the re-population of endangered tortoises, fish farming and breeding of forest animals. The management plan regulates the use of water in Apiwtxa, the contamination of water sources and waste management, as well as addressing spatial planning of the village, and monitoring of invasions by loggers and hunters. As pointed out by Isaac Piyãko Ashaninka,

the plan has strengthened practices that already existed and has made possible what the people wanted to achieve. The main goals were to ensure sustainable use of their territory's forest resources, enrich their gardens, and produce enough meat and fish to guarantee local food security without being dependent on industrially produced food.[32]

To implement the territorial management measures identified in the plan, the Ashaninka of the Amônia River have since 2007 established multiple agreements with public institutions and have developed various projects whereby they are eligible for state and private funding. As of 2015, most of the Ashaninka Territorial and Environmental Management plan has been successfully implemented. Local engagement and the participatory processes through which the plan was developed and later on implemented were decisive for the legitimacy of the plan.

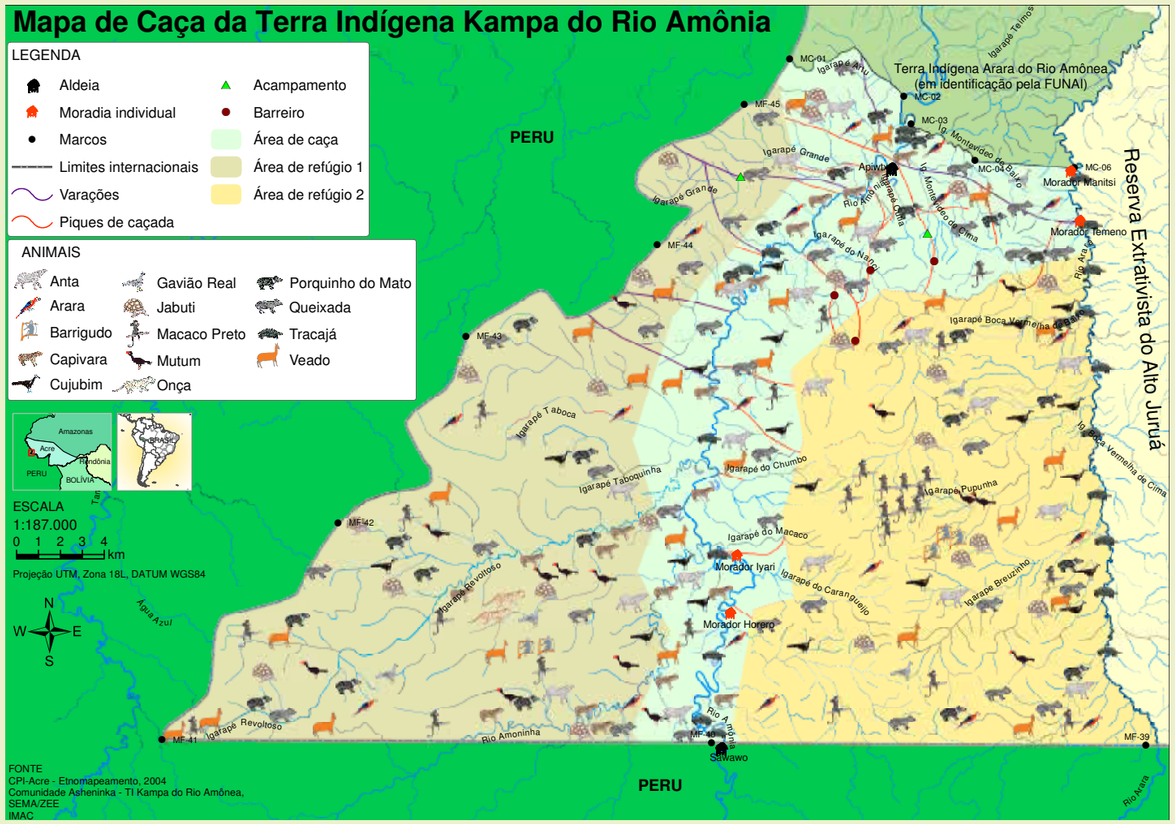
Sustainable income generation

The Ashaninka of the Amônia River have also been carrying out two projects funded by the Brazil Bank Foundation and the Acre state programme PROSER, seeking to strengthen sustainable practices and create economic alternatives for the populations of the Upper Juruá through development of fish farming, agro-forestry, and orchard nurseries. Early in 2015 the Amazon Fund (within the Brazilian Development Bank, BNDES) approved a project proposal from the Ashaninka of the Amônia river, making it the first, and today still the only, indigenous association selected by the fund. Their project seeks to develop sustainable economic alternatives by producing fruit for the communities' own consumption and for sale. In addition, surplus fruit will be used for production of pulp for juice. A small processing facility is planned under the Acre state policy of developing production chains for small-scale agriculture. The Ashaninka community hopes that creating economic alternatives can contribute to a halt in the expansion of cattle ranching in the Juruá area, and reduce the local participation in smuggling networks, an issue to be discussed in the following chapter.

Case 2: The Huni Kuin of Colônia 27

The titling of indigenous territories reversed a process of dispossession which began during the rubber boom, in the early twentieth century, when Brazilian and Peruvian migrants started pouring into the areas closer to the Tarauacá River. The Huni Kuin were forced off their lands and made

Benki Piyãko is leaving Apiwxta with his friends. He avoids travelling alone. As one of the Ashaninka leaders he has received direct death threats from those who don't like his work on indigenous rights and forest conservation.



The indigenous groups create maps to document resources and use. This map shows hunting area (light blue) and refuge areas (brown and yellow) for wildlife in the Ashaninka territory.

subject to rubber patrons who soon controlled forest resources, land and indigenous labour force.[33] The people became enmeshed in an enslavement system whereby they were forced to sell the rubber they collected to their patrons and to buy food and other items from them.

Unlike the Ashaninka, many Huni Kuin groups became landless and were subjected to the physical control of their patrons. This was the case with three Huni Kuin families who, in 1971, received a piece of land from their former rubber patron, the mayor of Tarauacá. In 1991, as part of the recognition of indigenous lands in Acre, this piece of land was recognized as Acre's smallest official 'territory', Colônia 27, which was titled with 1.05 km². In 2002, the Acre state authorities added 2 km² (of which only about 10% were forests) to the territory of the Colônia 27 as a compensation and mitigation measure for the paving of the BR-364 highway near Colônia 27 that year.[34]

Most of the territory of Colônia 27 was pasture land, as it was located on a former cattle ranch. Standing forests were highly degraded and water sources critically affected, as several streams had dried up. The people of Colônia 27 did not have access to game, fish, wood or palms. They had to buy food in the city of Tarauacá, and in the summer they depended on getting water transported to the village. Their biggest challenge was how to transform severely degraded lands into productive areas and enriched forests, reconstituting their territory so they could revive and maintain their cultural practices. 'We wanted to start a project that would get back the forests', says Asis Kashinawá, leader of Colônia 27, 'and we did it. We used to have cattle and we burned down pastures in order to cultivate, it did not help. We had to change, we wanted to have productive, rich gardens .What we did was to create a life project, and we did it because we wanted to survive.'

Transforming the territory

Acre state's implementation of forest-maintaining development policies enabled the Huni Kuin of Colônia 27 to initiate the desired process of environmental and cultural revival. Several public institutions were involved. The Huni Kuin of Colônia 27 participated, in cooperation with the

State's Environment Ministry (SEMA), in preparing maps of their territory, and in developing their Territorial and Environmental Management Plan. Through projects like 'Recovery of degraded areas in the Indigenous Territory of Colônia 27', supported by the federal program Demonstration Project of Indigenous Peoples[35] (PDPI), a gradual transformation got underway. Technical assistance came from IBAMA and Acre's state secretariat for agro-forestry extension and family based production – SEAPROF[36], and from NGOs like the CPI-Acre.

Huni Kuin of Colônia 27 have created agroforestry systems where native and introduced fruit trees are planted together with palms and trees that provide straw for thatching and wood. They have enriched their gardens by planting several types of manioc together with sweet corn and plantain, and established areas for cultivating plants considered sacred, such as *cipó* and *cahua,* together with other medicinal plants. They have started cultivating plants which are culturally valued, such as *jenipapo* (*Genipa americana*) used for body-painting, and others used for handicrafts. On occasions where the community gathers to receive visitors or to celebrate, they decorate their bodies with elaborate designs painted with *jenipapo*. The women produce a range of handicrafts for sale through their cooperative – headbands, bags and textiles.

A major achievement for the people of Colônia 27 has been the recovery of their water sources. Today, the streams are flowing throughout the year, and it is no longer necessary to buy water. Although hunting is not possible, the wide variety of plants in their gardens, together with newly reforested areas, attracts small rodents and birds, and biodiversity is gradually improving. To guarantee food security and reduce their dependency on cattle, the Huni Kuin of Colônia 27 have dammed up several ponds for fish farming, thereby also providing recreation places for the children. As one boy says, 'For us, the ponds are like rivers where we can play and fish.'

The inhabitants of Colônia 27 consider they have been successful. As Asis Kaxinawá puts it, 'Nowadays, we have a bit of everything: hens, fish, manioc, banana, papaya, limes, açaí[37]. We have a community that has brought back to life its rituals and dances, and the knowledge of sacred plants. Young people are no longer ashamed of being Huni Kuin – now they are proud of their identity. However, we still have too little forest and too little land.'

As in the case of the Ashaninka, the Huni Kuin of Colônia 27 have also actively related to Acre state's *florestania* policies in order to re-create and enrich the biodiversity of their lands, attempting also to ensure the well-being of their people. Their efforts to secure their livelihoods through establishing agroforestry systems and the reforestation of their lands have gone hand in hand with a process of cultural revitalization. The titling of Colônia 27 has meant restitution of lands they lost and the recognition of their efforts to survive as Huni Kuin. Titling also made it possible to gather family groups that had been forcefully moved and enslaved. For the Huni Kuin, this work has entailed the social and cultural reconstitution of their community.

Importance of land rights and territorial management

It is obvious that differences in the location and size of the territories and in historical experiences of colonialism influence the management of indigenous territories. Despite these differences, maintaining forests and re-creating their territory's biodiversity have been central for both the Ashaninka and for the Huni Kuin. Forest biodiversity is important because their entire life project as indigenous peoples depend on it.[38] They have dealt with the new conditions and constraints of demarcated territories by developing maps and territorial management plans. Acre's forest maintenance policies have been essential for these processes. By recognizing the indigenous peoples' mapping and management plans as part of the state's environmental instruments, the government has been able to channel resources for the development of these instruments, and also for implementing actions. The results are clearly visible in the territories, and are also evident from the deforestation statistics.

However, as we will see in the next chapter, there are still some challenges to both implementation and coordination of policies and measures of different types and at state versus federal levels.

THE HUNI KUIN: The official number of Huni Kuin (often referred to as Kaxinawá) in Brazil and Peru is 13,237 (BR: 10,818; PE: 2,419) and they live on the Brazilian-Peruvian border in the western Amazon. The Huni Kuin villages in Peru are located on the Purus and Curanja rivers. The villages in Brazil (in the state of Acre) are spread along the Tarauacá, Jordão, Breu, Muru, Envira, Humaitá and Purus rivers. 140 people in 41 families reside in Colônia 27. The total area of the territory is only 3.05 km2, and land distribution is 2.18 hectar per resident – critically low for livelihoods based on horticulture, hunting, fishing and gathering.

Sources: Instituto Socioambiental: https://pib.socioambiental.org/en/povo/kaxinawa/394 and CPI/AC http://cpiacre.org.br/conteudo/povos-e-terras-indigenas/

Komãyari demonstrating hunting practices.

4. Challenges for sustainable management; participation, coordination, and safety

"A people who are not interested in dialogue may become narrow-minded. We need to accept and make it clear that there are different ways of living, not just within the indigenous territories, but also in the areas that surround them."

– Benki Piyãko Asháninka

Acre's forest-maintenance development policies have achieved remarkable results with broad local involvement. However, such achievements need continuous support and engagement. There is also a great need for coordination of various policies and initiatives, since what happens in surrounding areas strongly impacts the biodiversity and the possibilities for sustainable management also within the indigenous territories. Finally, as we discuss towards the end of this chapter, lack of government enforcement and the insecurity experienced by local people severely restrict local possibilities for maintaining the sustainable management of indigenous territories.

Lack of participation in implementation

Indigenous villagers interviewed for this report highlighted how their participation was important to ensure that the management plans (PGTA)

were based on local realities, with measures approved by the community. As Francisca Arara, president of the Organization of Indigenous Teachers (OPIAC) explained, the plans expressed the thoughts, hopes and visions of the village leaders as well as of family heads. Their participation and engagement made the plans legitimate tools of regulation.

However, in the implementation of the management plans, participation has been weaker. One example is the lack of involvement of the indigenous agro-forestry agents. When the management plans were elaborated, the agro-forestry agents contributed to the development of alternatives for sustainable management in line with the specific characteristics of each of the territories and the social organization of the population. But when the management plans were to be implemented, state institutions did not take proper account of what had already been agreed upon when the plans were made, nor did they involve the communities and the agro-forestry agents sufficiently. In some cases, projects that the communities had never agreed upon were financed.

According to Josias Pereira Kaxinawá[39], president of the Organization of Indigenous Forestry Agents in Acre (AMAAIAC), state institutions have often failed to take cultural diversity into account when implementing their policies and programmes. They have not properly recognized the training, knowledge, experience and competence of the indigenous agro-forestry agents in fostering intercultural participation, nor have they listened to the responses and perspectives of the local communities.

The problems of insufficient participation or implementation deviating from plans are not unique for the indigenous territories. They have been even more serious in the surrounding extractive reserves and in some of INCRA's [40] colonization settlements communities. The extractive reserves are under federal regulation, and the management plans for these have often been developed from the outside without local participation. [41] In the case of community development plans, these have often been based on local participation and local needs, at least in the development phase. But since community development plans are per community (and do not cover a whole area), these plans can be in conflict with each other or the management plan for the extractive reserve within which the community lives.

Finally, a big problem is that neither the community development plans nor the federal management plans of the extractive reserves establish clear linkages with the territorial and environmental management plans of neighbouring indigenous territories.[42] The disparities between these instruments seriously limit the possibilities for achieving sustainable management of both the reserves *and* the indigenous territories.

FACT box: Challenges of implementation

Even though most of the community development plans in Acre were developed through participatory processes, poor implementation has caused internal conflicts and weakened community organization. One example is the Upper Juruá Extractive Reserve that borders with the Ashaninka indigenous territory of the Ashaninka of the Amônia river. In the Reserve, nine community development plans had been prepared when the work with this report was initiated, four of which have been approved by the Acre State Environment Ministry (SEMA) and have received financial support. These nine community development plans involve approximately 400 of the 1200 families living in the reserve. While the plans were developed through a participatory process, the implementation has been top-down, causing conflicts in the communities.

According to representatives of civil society organizations and of state institutions, delay in implementation of the plans led to growing distrust towards the community leaders who had led the preparation processes, and towards the state authorities. Adding to the problem, many of the technicians and civil servants in charge of the implementation had not participated in the elaboration of the plans, nor were they familiar with the nine communities in question. Thus, they were not able to assess what kinds of equipment and support the communities actually needed. Similar shortcomings have affected the implementation of community development plans in other regions of Acre state, as in Tarauacá, Envira, Upper Acre, Brasilea and Xapuri. Communities that were well organized and working together at the time when the plans were developed have been hit by internal conflicts and disputes over the resources received.

Source: Interviews in Acre

In Colônia 27 the Kaxinawas have regenerated forest with local species, and dry wasteland is turned into green forest. Traditional knowledge of medicinal plants is used in everyday health care, for instance clearing the eyes.

Lack of coordination hinders sustainable management

For both the Ashaninka of the Amônia river and the Huni Kuin of Colônia 27, integrated planning of different types of territories is essential. The biodiversity and productivity of their territories greatly depend on also the neighbouring communities, and that they are able to develop and maintain sustainable practices.

As Benki Piyãko from Apiwxta stressed when interviewed: 'We, the Ashaninka of the Amônia river, are deeply worried not about what is happening within the indigenous territories, but about what is coming from the outside.'[43]

For many of the extractive reserves in Acre, including that of the Upper Juruá (see box on previous page), neighbouring the Ashaninka territory, sustainability has proved to be a challenge. According to both representatives of civil society organizations and state institutions, several communities within Upper Juruá Extractive Reserve have dropped their extractive activities (like rubber tapping), and taken up cattle ranching – with negative impacts for the nearby territories. The reasons for these changes illustrate some of the challenges facing communities who wish to maintain the forest.

The first reason for the change in activity is economic. Rubber-tappers in the Upper Juruá lack long-term financial support for maintaining their agricultural and forest extraction activities. If they want to start cattle ranching, however, both state and private credit is available. Cattle can also function as a 'savings account', since livestock can easily be sold in case of need. Hence, cattle ranching is economically attractive.

In addition to the economic factors, changing cultural perceptions and values also have an influence. Younger generations of rubber-tappers find extractive activities to be strenuous, time-consuming and generally less attractive than cattle ranching, which gives social status and has become culturally valued[44].

Changes like these have led to increasing deforestation and forest degradation in the Juruá region. The result is scarcity of resources that the extractivist and riverine populations of the settlements still depend upon and value highly. The forest and biodiversity of the Amônia river are also affected. Benki Piyãko Ashaninka explains why: 'Deforestation has caused rivers to dry up and game to disappear, and it spurs conflict between neighbours. People from the colonization settlement and the extractive reserve invade the indi-

genous territories in search of game and fish. Many of them are even involved in illegal logging.'

In order to counter the negative development, the Ashaninka leadership sees it as urgent that the government continues to invest in the development of production based on sustainable harvesting of forest resources. These productive activities should benefit the people living in colonization settlements, in the extractive reserve and in the indigenous territories.[45]

The Ashaninka of the Amônia river have already developed several projects with an intercultural and regional approach, including in the Arara communities, and the non-indigenous neighbouring communities of the Upper Juruá Extractive Reserve. The goal is an integrated environmental planning for the whole basin of the Upper Juruá. They wish to share their experiences in environmentally sustainable productive activities and raise environmental awareness. In 2007 the Ashaninka created the Yorenka Ãtame Centre, focused on training indigenous and non-indigenous communities in the sustainable management of forest resources in order to counter degradation caused by logging and cattle ranching.[46]

Challenges with federal welfare policies

Acre's forest-maintenance and development policies are not the only policies impacting the opportunities for a sustainable livelihood maintaining the forest. There are also multiple federal policies and programmes on poverty reduction and welfare which intersect with these. Some of the most relevant and widespread distribution programmes are *Bolsa Família*[47], *Bolsa Verde* (see box), maternity benefits and retirement pensions. Other programmes are the National Family Agricultural Food Acquisition Programme (PAA) and the National School Food Programme (PNAE). At the local level, the resources channelled by these programmes are welcomed by the beneficiaries, and may make a difference in their lives. However, the programmes do not take into account cultural differences or the specificities of forest-based livelihoods. Hence, we argue below, they may serve to weaken these livelihoods, and halt the further development of sustainable alternatives.

FACT BOX: Bolsa Verde

The Support Programme for Environmental Conservation, Bolsa Verde, was launched in 2011 and grants 300 BRL each trimester to families living in extreme poverty in prioritized areas for environmental protection. The support is granted for a period of two years with the possibility of being extended. The aim is to link income increase for rural poor to the conservation of ecosystems and the sustainable use of natural resources. Qualified for support are people that engage in sustainable use of natural resources in extractive reserves, national forests, federal reserves for sustainable development and some 'special environment areas designated under the agrarian reform (Assentamentos Ambientalmente Diferenciados da Reforma Agrária). Other territories occupied by riverine and extractivist populations, indigenous peoples, quilombolas and other traditional communities can also be included in the programme.

Source: www.mma.gov.br

Bolsa Família, pensions and maternity benefits

Both the Ashaninka of the Amônia river and the Huni Kuin of Colônia 27 receive *Bolsa Família,* maternity benefits and retirement pensions. In Apiwtxa the effects of these programmes are widely discussed and questioned. When the field work for this study was carried out 57 families benefitted from *Bolsa Família* and 28 individuals received retirement pensions in Apiwtxa. The number of maternity benefits was uncertain since these benefits are paid once, when a child is born. *Bolsa Família* and retirement pensions are paid to mothers and to elders, respectively.

Additional income is appreciated and may make a difference for a household. To collect the funds, however, the recipients must travel to Marechal Thaumaturgo to collect the payment and stay for several days, as disbursement is often delayed. The women travelling must often take the children with them, causing absence from school. Living expenses in the city are also high, and several people have run up debts with traders and shop-owners. This is the case especially for young women with little experience of handling cash.

In Dona Piti's view, the money people receive from the state and which is spent in the shops run by urban, non-indigenous owners could be used to strengthen the Ashaninka's own cooperative and productive capacities. Ashaninka leaders share her worries. The distribution benefits are attracting

Two generations of Huni Kuin ready for celebration.

people to the city, and creating new consumption habits. In the view of the Ashaninka leadership, these programmes do not act to strengthen local economic autonomy. Instead, they create new dependencies. Further, these programmes should take into account the geographical location and the social organization of the communities in question, and indigenous organizations and communities should have a say in how such national programmes are implemented in indigenous territories.

For the Huni Kuin of Colônia 27 the programs seem to be more beneficial. As their territory is so small, they depend on access to local markets to get enough food, a situation shared with other indigenous peoples whose lands are surrounded by farms, in the municipalities of Tarauacá and Feijó. In Colônia 27, at the time of the field visit, 27 families received *Bolsa Familia,* and 12 individuals received retirement pensions. The money was spent on buying food they are not able to produce, and on education. The children of Colônia 27 attend school in the city of Tarauacá from the age of ten, and parents must pay for transport, meals and lodging.

Bolsa Verde

There are also shortcomings with the follow up of the program *Bolsa Verde,* received by neighbouring extractive communities of the Upper Juruá Extractive Reserve. According to the federal authorities, *Bolsa Verde* represents an important step towards recognizing and compensating traditional extractivist and riverine communities for the environmental services they provide to society. Ideally, *Bolsa Verde* is given to households to support the maintenance of forest-extractive practices. However, our interviewees reported that there was no follow-up from the environmental authorities as to how local populations understand the goals of *Bolsa Verde,* or how they use these resources. Several of the families that receive *Bolsa Verde* have been buying cattle with the money, instead of investing it in forest-extractive practices which many see as tiresome and economically risky.[48]

Food programmes

Despite the diverging effects the state and federal welfare programmes seem to have in different localities, a shared characteristic is that the resources provided increase individual and household consumption capacity but not necessarily sustainable productive activities. Similar problems are common for other national programmes that target small-scale, family-based agriculture: their design is not adapted to local circumstances. It will have to be adapted to the specifics of the various indigenous territories and forest-dependent communities in order to enhance sustainable management and cultural practices, as the Ashaninka experience described below shows.

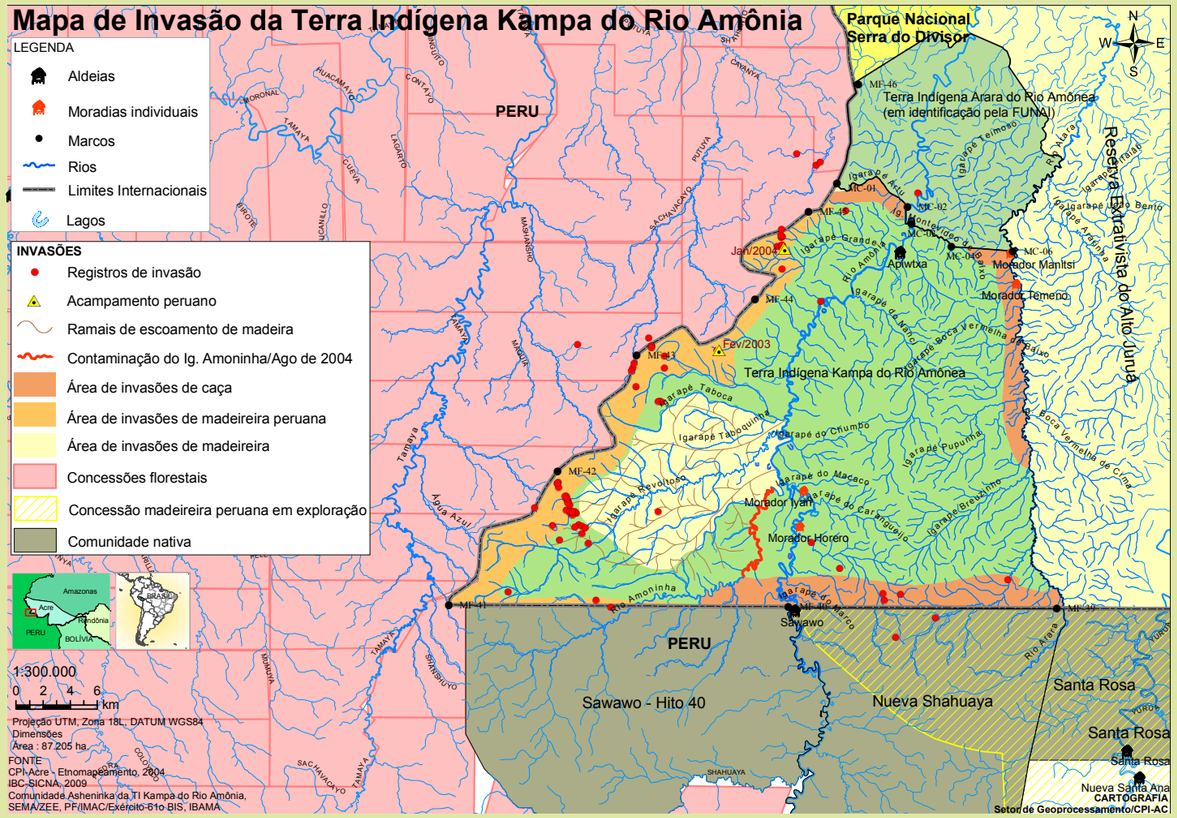
According to national policies, at least 30% of school meals provided at schools are to be supplied by local, small-scale producers, a goal to be achieved through public programs such as the National Family Agricultural Food Acquisition Programme and the National School Food Programme mentioned earlier. These programmes aim to strengthen family-based agriculture by creating and securing small farmers' access to internal markets. These policies have been implemented in Acre's indigenous territories, with varying degree of effect.

In Apiwtxa, a large portion of the school meals provided by the municipality of Marechal Thaumaturgo in the past consisted of industrially produced and canned food, bought in Rio Branco and Cruzeiro do Sul and often out of date by the time it reached the village. Not only was the food unhealthy, the children did not like it and it generated more industrial waste, like metal cans and plastic. The Ashaninka demanded that the municipal authorities use local produce instead. With fish from the local ponds, fruit and other garden products, the children could consume healthy and culturally appreciated food, and Ashaninka families could receive an income. These changes were implemented and have been successful.

Like the Ashaninka, the Huni Kuin of Colônia 27 also benefit from national food programmes. However, since the Huni Kuin are not able to produce enough food, they have opted for a mixed solution, selling their own produce to the school, but also receiving some of the industrially produced food provided by the municipality. Since families and children travel to the city every day, their consumption patterns already include other types of food. Hence, the Huni Kuin combine production for school meals with sale of their agricultural produce to urban markets to provide income.

Insecurity and illegality

The Ashaninka Territory of Amônia River is one of ten indigenous territories in Acre that are located along the border to Peru. In this region, there are specific threats against the sustainability of these territories and, not least, the security of their inhabitants.



Mapping outsiders' invasions is an important part of the monitoring of Ashaninka territory, and is also used to argue for increased government control to stop illegal logging and drug trafficking. The dark orange shows illegal hunting, the orange and yellow show illegal logging.

Like previously explained, the official recognition and demarcation of their territory made it possible for the Ashaninka of the Amônia river to exercise better territorial control, and to initiate actions that helped to break down the debt-peonage system that had subordinated them. They managed to recover and ensure the biodiversity of their territory, improving food security and thereby the well-being of the people. However, their territory borders on Peru, and is directly affected by illegal logging and drug trafficking. This constitutes a serious threat to the people of Apiwtxa and the surrounding areas.

Despite efforts from the Ashaninka to defend their territory and their calls for efficient government enforcement, the illegal logging and trespassing, although periodically slowed, have never ceased. During 2000–2005 the presence of illegal loggers on Ashaninka lands peaked. Their presence was fuelled by the passage of the Forestry Law in Peru in 2000, which introduced forestry concessions throughout the Peruvian Amazon. This law brought an onslaught of legal and quasi-legal loggers who invaded untitled indigenous lands in the Peruvian borderlands, also trespassing onto Brazilian territory and onto indigenous territories and conservation areas. In order to protect their territory from illegal logging and stop the continuous invasions, the Ashaninka tried to mobilize various state institutions, including the Federal Ministry of the Environment (IBAMA), Acre's Environment Institute (IMAC), the Governor of Acre, the federal police and the military. Seeking to spark the development of consistent trans-border policies, the Ashaninka leadership met with Brazilian ministers and even with President Toledo of Peru. Eventually, after several Brazilian joint operations, illegal logging camps found within the Ashaninka territory and the Serra do Divisor National Park were closed down. Considerable amounts of mahogany and cedar were seized, and Peruvian loggers were taken into custody. For a while, the illegal logging and trespassing in the Upper Juruá region decreased.[49] However, from 2011 these activities again gained force. Fearing that their territory would be invaded

once more, the Ashaninka mobilized and established close contacts with Peruvian Ashaninka communities and organizations.

The Ashaninka of the Amônia river have succeeded in preventing loggers from entering their territory, but it has proved both difficult and dangerous to attempt to halt illegal logging in the rest of the region.

Illegal logging linked to drug trafficking

Illegal loggers are part of wider Peruvian–Brazilian drug trafficking networks that take advantage of the inaccessibility of the border region. These networks have involved many actors in both countries. As explained by the Ashaninka leadership:

"The border areas are covered by dense rainforests that hide all kinds of people, among them criminals escaping or released from prison. People coming from border communities are trapped in networks of Peruvian and Brazilian smugglers that combine drug trafficking with illegal logging. Drug dealers and drug cartels use people from local communities. These networks include also some individuals living in Marechal Thaumaturgo and even working within local state institutions."[50]

The illegal logging and drug trafficking create severe security problems for local organizations. The Brazilian and Peruvian Ashaninka leaders have long received death threats for opposing the actions of these networks on their lands. At times, Brazilian Ashaninka representatives have not dared to walk alone in the streets of Marechal Thaumaturgo. In September 2014, increasing trans-border coordination between Brazilian and Peruvian organizations was brutally stopped when four Ashaninka leaders from the Saweto community in Peru were murdered on their way to a meeting in Apiwtxa. Saweto had long been fighting for their land title, and among the killed was the well-known activist Edwin Chota. The assassinations led to broad international condemnation. Brazilian federal police investigated the possible involvement of local institutions in Marechal Thaumaturgo. Several Peruvians and Brazilians were arrested, but neither Brazilian nor Peruvian authorities have undertaken major actions to disarm and disable these networks and they continue to operate in the region.

Indebtedness and migration

With the illegal logging and drug trafficking, a new system of indebtedness and enslavement has emerged. People in communities located on both sides of the Peru-Brazil border still lead traditional ways of life, living from hunting, fishing and gardening. On the Peruvian side, however, indigenous lands are often either not titled, or overlapped by forest concession overlap with communal lands, leaving communities vulnerable to the activities of illegal loggers and drug traffickers. Logging and drug bosses occasionally employ indigenous villagers to cut down the forests; they also lend them money and provide them with medicines and other goods. On the Brazilian side, these bosses also provide people in the extractive reserves and the indigenous territories with much-desired income and goods, in exchange for being allowed to use indigenous and conservation lands for drug trafficking.[51]

The Ashaninka of the Amônia river and the bordering Peruvian Ashaninka communities have always had close relations, with people moving back and forth. However, different forest regimes and welfare systems have created different living conditions in Peru and in Brazil. Peru's Forest Law and lack of respect for indigenous peoples' rights create harsh conditions on the Peruvian side. As a consequence, individuals and entire families move to Brazil. A further strong motivation behind the migration is the possibility of gaining access to Brazilian social benefits and programmes like *Bolsa Familia,* maternity benefits and retirement pensions.

The Ashaninka of the Amônia river are worried about the relations some Peruvian Ashaninka have with logging and drug trafficking patrons and fear that these relations may force the Peruvian Ashaninka to continue trading game and fish and to participate in illegal activities living in Brazil, contributing to the degradation of Brazilian indigenous territories. To address the vulnerable situation of border Ashaninka communities, Apiwtxa has an institutional agreement with the Peruvian Indigenous Organization, ACONADIYSH, which represents the Peruvian Ashaninka living in that part of the Peru–Brazil border area.[52] The aim of this agreement is to create alternatives that can allow the Peruvian Ashaninka to break out of indebtedness and enslavement, as the Ashaninka of the Amônia river did two decades earlier. For the Ashaninka of the Amônia river, local initiatives like these are crucial, but they must be supported by coherent state policies focused on dealing with the power of invasive forces.[53]

Weak enforcement

In the view of the Ashaninka of the Amônia river and other organizations working in the Upper Juruá, the Brazilian authorities are responsible for the expansion of logging and drug trafficking since their actions have been weak and inconsistent.[54] By law, indigenous territories and conservation areas are the responsibility of the authorities, but the border areas are considered peripheral, and the presence of the federal authorities has been minimal. When the interviews for this report were done, FUNAI had only one person in charge of the indigenous territories of Juruá, one person responsible for monitoring all of Serra do Divisor National Park, (843 012 ha) and one for the RESEX of Upper Juruá (506 186 ha). Federal military supervision of the borders was sporadic and there were no clear policies regarding migration.[55]

Coordinated management of interdependent territories

The success of *florestania* policies, or forest based development, hinges on several elements. Continued participation through implementation of programs and policies is one, and better coordination between a wide range of very different actors another. The ability to adapt policy measure to local knowledge, culture and circumstances would be a third. But perhaps most importantly, without security from invasions and law enforcement to combat crime, local populations, indigenous or not, will experience great difficulties in managing forests sustainably.

5 Conclusion: Enhancing Forest Sustainability and Local Rights

For nearly two decades, sustainable management of Acre's forests has been an important goal for the government of Acre, in close cooperation with social movements and indigenous peoples. A platform of laws, instruments and institutions has been put in place. Impressive achievements have been made in securing the rights of forest-dependent populations and planning for sustainable management of standing forests.

As Acre state is home to 15 indigenous peoples in addition to rubber-tappers, Brazil nut gatherers and smallholders, forest sustainability is intrinsically linked to socio-cultural diversity. This includes enhancing culturally diverse uses of the forest resources, local knowledge and cultural values that keep forests biologically rich.

Sustainable management of forests is a complex task. It requires, on the one hand, securing the integrity of forest ecosystems and forest biodiversity; and, on the other, defining and securing the rights and livelihoods of those who live in these forests. We conclude this report by examining these challenges, and offering some recommendations.

Enabling policies: Land rights and land use planning

In Acre, land tenure regularization and recognition of indigenous territories from the 1990s and onward has enabled indigenous peoples to exercise better control of their territories and also

Fishing is important for the Ashaninka's livelihood, and they have taken actions to secure sustainable management of both fish stocks and the tortoise population.

to recover lost forest lands in an impressive manner. The Ashaninka territory on Amônia river, *Kampa do Rio Amônia* and the Huni Kuin territory Colônia 27 are illustrating examples. As for many indigenous communities in Acre, previous decades of marginalization, displacement and in many cases slave-like relationships with land- and plantation owners, have been replaced by collective management of land and resources.

The communities have taken a number of measures to recover degraded forest and deforested areas, and to secure sustainable livelihoods. They have planted local tree species, banned sale of hardwood, regulated the harvesting of tortoise eggs, and banned fishing and hunting in specific areas to protect the species. Recognition of territories with fixed boundaries has contributed to empowering indigenous peoples, and has been a fundamental requirement for the investment in improvement of livelihoods.

Achieving sustainable forest management founded on the rights of forest-dependent populations requires linking local engagement and participation and the development of local planning instruments with overarching environment and territorial policies. The communities' actions have been supported by both state level and federal policies. Acre state has developed particularly two important territorial and environmental governance instruments – the Plan for Ecological and Economic Zoning and the System of Incentives for Environmental Services (SISA). Both were passed into law after broad consultation processes. While SISA is still in its early stages, the Plan for Ecological and Economic Zoning has served to guide the development of territorial and environmental planning instruments like ethno-maps and management plans of indigenous territories. Through participatory processes these instruments are developed by local communities, and not just for them. In this way, maps and management plans can become legitimate instruments of governance.[56] However, as the case studies of this report show, participation has been better in the planning stage and not so good when it comes to implementation. Local engagement and meaningful participation must be recognized as as a continuous process, not isolated events. Local engagement and meaningful participation demand responsive governments that are prepared to let the priorities of local communities influence the design and implementation of policies that affect them.

Participation, traditional knowledge and cultural identity

In both of the territories described in this report, the granting of land rights and the participatory approach to forest management and community development has led to a strengthening of the indigenous communities' identity and traditional culture and practices. Representatives interviewed from both territories emphasized that seeing how their knowledge and cultural traditions form the basis for management plans has increased pride and sense of community, something that again has facilitated common action.

The training of indigenous agro-forestry agents, as well as the establishment of a school in Apiwtxa has been important to revive and pass on the knowledge and culture related to the sustainable use of forest resources. Cultural practices like body painting, the making and usage of traditional clothing, revival of music and ceremonies etc. have been gaining ground in parallel with the regeneration of knowledge for sustainable management of natural resources.

Also the change in the school food program has been important for identity and culture. Now that the communities themselves can deliver food from the forest or their agro-forest activities to the school, their children can eat culturally appreciated food and important knowledge of resource use is passed on.

Forest based income generation and benefit sharing

Sustainable forest management must go hand in hand with ensuring the well-being of all forest-dependent communities. This means reinforcing current subsistence production forms and promoting advantageous participation in local and regional markets, like for example the delivery of food products for the village's school meal. The well-being of forest-dependent communities hinges on maintaining culturally valued ways of living such as hunting, fishing, gathering, horticulture and moving about, so that people can have access to enough forest products and thereby a healthy and valued life. Their well-being also depend on having access to commercially produced goods as well as services like education and healthcare.

The cases covered in this report show that state investments to support and reinforce the development of new forest product chains (such as fish ponds or fruit press) and access to new markets (like the national health agency's purchase of condoms) is important for creating incomes to

promote social equity and meet the expectations of new generations.

Coordination needed

Respecting the rights of local populations and achieving the sustainable management of forests requires coherent policies and programmes within the state of Acre, and between it and the Brazilian federal government. Although the Acre government has made great efforts to develop overarching territorial and environmental policies, shifts in government priorities have meant less effective government enforcement. Federal programmes with weak federal institutions have also contributed to poor government enforcement. While mapping of forest resources and management planning activities have had positive effects in the indigenous territories, there has been less success in recuperation of degraded forests and sustainable resource management in neighbouring areas. Like the examples shown with the extractive reserve in Upper Jurará, community development plans were developed through a participatory process, but there were serious shortcomings in implementation. Moreover, the community development plans were not in line with the management plan of the extractive reserve as a whole. Additionally, neither the community development plans nor the management plan for the extractive reserve have been seen in conjunction with the territorial and environmental management plans of the indigenous territories. As management of the extractive reserve is a federal responsibility, the Acre government has limited possibilities for action here, but coordination should definitely be better.

Coordination needs to be sought also with federal programmes aimed at reducing poverty. While programs such as *Bolsa família* benefit individuals, they should be better adapted to the specifics of the various indigenous territories and forest-dependent communities in order to avoid creating new dependencies and to enhance sustainable management and cultural practices. Also programs such as *Bolsa Verde*, intended to support sustainable extractive activities in the forest have been a challenge for indigenous territories. Lack of opportunities for communities in the Extractive reserve and in the colonization settlements, together with easy access to credit for livestock, favours the expansion of cattle ranching – an activity that is increasingly accorded higher social status. The environmental sustainability of the indigenous territories depends on achieving the sustainability of surrounding areas, including income opportunities or well-being of neighbouring indigenous and non-indigenous populations.

External threats, law enforcement and security

While land titling has enabled indigenous peoples to exercise better control of their forests there are still threats for both the forest and the people, especially in the territories along the Brazil–Peru border. Networks of illegal logging and drug trafficking continue to infringe on indigenous lands and rights. This creates dangerous conflicts and modern forms of enslavement have emerged. It is urgent to reinforce local monitoring and surveillance capacities. Federal institutions must have the capacity to enforce existing laws and halt trespassing, so that border populations and their territories can be effectively protected.

Thus, rights-based protection coupled with the forest communities' ownership of sustainably managing forests while meeting their development needs are the central premises for the preservation of the world's remaining rainforests. The state of Acre has set an example of how one can try to facilitate this to happen. The learning from their experience should be of interest to all aiming to achieve sustainable development.

Abbreviations

ACONADIYSH (ES): The Association of Native Communities for the Integral Development of Yurua, Yono y Sharakoiai / Asociación de Comunidades Nativas para el Desarrollo Integral de Yurua Yono Sharakoiai
AMAAIAC: Organization of Indigenous Agro-forestry Agents in Acre / Associação do Movimento dos Agentes Agroflorestais Indígenas do Acre
CPI-ACRE: The Pro-Indigenous Commission of Acre / Comissão Pró-Índio do Acre
FUNAI: Brazil's National Foundation for Indigenous Peoples / Fundação Nacional do Índio
IBAMA: The Federal Brazilian Environmental Agency / Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis
ICMBIO: The Chico Mendes Institute for Biodiversity Conservation / Instituto Chico Mendes de Conservação da Biodiversidade
IMAC: Acre State Environment Institute / Instituto de Meio Ambiente do Acre
INCRA: National Institute for Colonization and Agrarian Reform / Instituto Nacional de Colonização e Reforma Agraria
OPIAC: Organization of Indigenous Teachers / Organização dos Professores Indígenas do Acre
PAA: The National Program for Family Agriculture and Food Aquisition / Programa Aquisição de Alimentos
PDC: Community Development Plan / Plano do Desenvolvimento Comunitário
PDPI: Demonstration Project of Indigenous Peoples /Projeto Demonstrativo de Povos Indígenas
PGAI: Acre's Integrated Environmental Management Project / Programa de Gestão Ambiental Integrado
PGTA: Territorial and Environmental Management Plan / Plano de Gestão Territorial e Ambiental (only applicable to indigenous territories)
PNAE: National School Food Programme / Programa Nacional de Alimentação Escolar
PROACRE: Acre's Social and Economic Inclusion and Sustainable Development Project/ Programa de Inclusão Social e Desenvolvimento Econômico Sustentável do Acre
PROSER: Acre Social and Economic Inclusion Program / Programa de Saneamento Ambiental e Inclusão Socioeconômica do Acre
RESEX: Extractive Reserve / Reserva Extractivista
SEAPROF: Acre's state secretariat for agro-forestry extension and family based production/ Secretaría de Estado de Extensão Agroflorestal e Produção Familiar
SEMA: Acre State Environment Ministry / Secretaria de Estado de Meio Ambiente
SISA: System of Incentives for Environmental Services / Sistema Estadual de Incentivos de Serviços Ambientais
ZEE: Environmental and Economic Zoning of Acre / Zoneamento Ecológico-Econômico do Acre

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Endnotes

1 See for instance Duchelle et al. 2013
2 http://www.obt.inpe.br/OBT/assuntos/programas/amazonia/prodes, accessed 30.08.17. In the latest new wave of deforestation in Brazil, deforestation has increased again also in Acre, escalating to 372 km2 in 2016.
3 Meyer, Staggs and Miller, 2014. GreenBiz. September 29.
4 Allegretti 1990
5 The word florestania derives from the Portuguese word floresta meaning «forest», and cidadania meaning «citizenship» (explained well in http://2celsius.org/florestania-amazonian-social-development)
6 Duchelle et al. 2013
7 The east–west BR-364 connects the state of Acre with the state of São Paulo. The construction of the highway was initiated in the early 1960s. The section in Acre was paved in the early 1990s after years of controversy caused by concerns for its socio-environmental consequences (Source: https://en.wikipedia.org/wiki/BR-364). The BR-317 runs southwards from Boca do Acre in the state of Amazonas, through Acre's capital, Rio Branco and to Assis where it connects to Bolivia and the Interoceanic Highway running from Peru's rainforest to the Pacific Ocean.
8 Reserva Extractivista later became a category in Brazil's federal system of protected areas.
9 There are seven stages for achieving legal recognition (regularization) of indigenous territories. (Gavazzi 2015, WWF 2013). For an updated list of status of all territories in Acre, see http://cpiacre.org.br/conteudo/povos-e-terras-indigenas/
10 We use the term "land-use planning" according to its definition by FAO: «the allocation of land to different uses across a landscape in a way that balances economic, social and environmental values. Its purpose is to identify, in a given landscape, the combination of land uses that is best able to meet the needs of stakeholders while safeguarding resources for the future» http://www.fao.org/sustainable-forest-management/toolbox/modules/land-use-planning/basic-knowledge/en/
11 Zoneamento Ecológico-Económico do Acre
12 Schmink 2009.
13 As Little (2006) explains, 'ethno-mapping', 'ethno-zoning' refers to culturally distinct populations and to culturally distinct approaches and understandings of forest landscapes, and of human–nature relations.
14 Graf, 2014
15 In Portuguese Agentes Agroflorestais Indígenas
16 163 agro-forestry agents from 14 different indigenous peoples working in 25 indigenous territories (2015)
17 Through programmes like ProAcre and PROSER, supported by the World Bank's International Bank for Reconstruction and Development.
18 Maia et al. 2014
19 SISA's Certification of Smallholder Properties Programme provides for technical assistance and direct cash payments and is implemented by SEAPROF
20 Duchelle et al. 2013; Interviews 30.04.2014
21 Governo do estado do Acre 2017, Acre em Números 2017. Secretaria de Estado de Planejamento – SEPLAN. Rio Branco.
22 Fonseca, Souza & Veríssimo 2015; Agrawal et al. 2013;
23 Data from 2014 from the National Institute for Spatial Research (INPE) project monitoring deforestation in the Amazon (PRODES) 2014 http://www.obt.inpe.br/OBT/assuntos/programas/amazonia/prodes
24 Gavazzi, 2015; Apiwtxa-AMAAIAC-CPI, 2007
25 Pimenta 2007:13
26 According to Gavazzi (2015), 80% of the Ashaninka of Amônia River live in the village of Apiwtxa and its surroundings. A new village was recently founded, Apiwtxa 2, where four families currently live.
27 Interviews 20.04.2015
28 See also Pimenta, 2007; Salisbury, Borgo López & Vela Alvarado, 2012
29 In 2016, Isaac Piyãko was elected mayor of Marechal Thaumaturgo with 56.52% of the votes.
30 Interview 22.04.2015
31 Gavazzi 2012, 2015
32 Apiwtxa, AMAAIAC, CPI/AC 2007
33 OPIAC & CPI/ACR, 2002
34 Gavazzi 2015, p. 32
35 http://www.mma.gov.br/apoio-a-projetos/povos-indígenas
36 SEAPROF is the responsible state body for the implementation (execution) of the Territorial and Environmental Management Plans (PGTA)
37 The açaí palm is a species of palm tree cultivated for its fruit and palm hearts. Latin name: Euterpe oleracea (Wikipedia)
38 See Escobar (1998) on the importance of biodiversity conservation for social movements
39 Interviews April 2015
40 INCRA is the Brazilian National Institute for Colonization and Agrarian Reform. INCRA has facilitated settlements of poor families in what was previously privately owned land in different parts of Brazil.
41 Management plans of Extractive reserves is the responsibility of the federal institute Chico Mendes of Conservation of Biodiversity (ICMBio)
42 Interviews 28.04.2015; 29.04.2105; 30.08.2015
43 Interviews in April 2015
44 Cattle ranching is allowed in extractive reserves as long as deforestation limits are not exceeded (Hoelle 2015).
45 From communal meeting, 18.04.2015
46 Interviews 07.04.2015, Pimenta 2010
47 Bolsa Família is a social welfare program of the Brazilian government, part of the Zero Hunger ("Fome Zero») network of federal assistance programs. The program attempts to reduce short-term poverty by direct cash transfers and fight long-term poverty by increasing human capital among the poor through conditional cash transfers. (Source: Wikipedia)
48 Interviews 28.04.2015; 29.04.2105;30.08.20
49 Salisbury, Borgo López & Vela Alvarado (2012), Pimenta (2010)
50 Interview 22.04.2015
51 Interviews April 2015
52 ACONADIYSH represents Peruvian Ashaninka, Arawak and Jaminawa communities.
53 Gavazzi 2015, Interview 22.04.2015.
54 Communal meeting 06.04.2015
55 Interview 28.04.2015
56 Little 2006

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