Amazon Assessment Report 2021

Chapter 16

The state of conservation policies, protected areas, and Indigenous territories, from the past to the present

Vista aérea da Terra Indígena Yanomami (Foto: Bruno Kelly/Amazônia Real)

THE AMAZON WE WANT

Science Panel for the Amazon

SUSTAINABLE DEVELOPMENT SOLUTIONS NETWORK
A GLOBAL INITIATIVE FOR THE UNITED NATIONS

About the Science Panel for the Amazon (SPA)

The Science Panel for the Amazon is an unprecedented initiative convened under the auspices of the United Nations Sustainable Development Solutions Network (SDSN). The SPA is composed of over 200 preeminent scientists and researchers from the eight Amazonian countries, French Guiana, and global partners. These experts came together to debate, analyze, and assemble the accumulated knowledge of the scientific community, Indigenous peoples, and other stakeholders that live and work in the Amazon.

The Panel is inspired by the Leticia Pact for the Amazon. This is a first-of-its-kind Report which provides a comprehensive, objective, open, transparent, systematic, and rigorous scientific assessment of the state of the Amazon's ecosystems, current trends, and their implications for the long-term well-being of the region, as well as opportunities and policy relevant options for conservation and sustainable development.

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Graphical Abstract

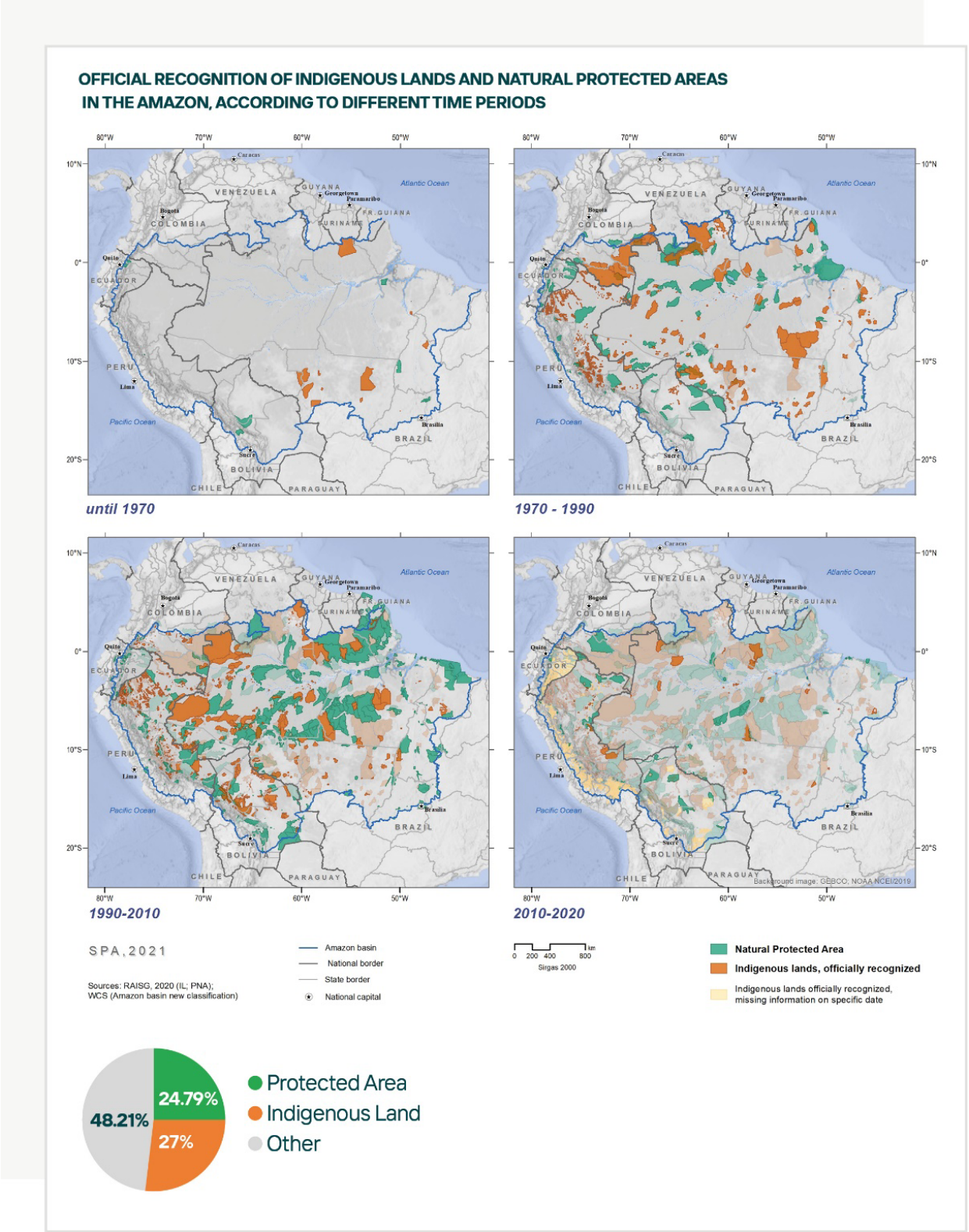

Figure 16.A Graphical Abstract

Past and Current State of Conservation Policies, Protected Areas, and Indigenous Territories

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Key Messages

- Including Indigenous territories, almost 50% of the Amazon Basin is under some type of recognized or legal protection framework, showing the great potential of the Amazon to conserve and manage vital ecological connectivity.
- Rates of deforestation are on the rise across the region, putting Indigenous territories (ITs) and protected areas (PAs) under renewed pressure.
- The commitment of countries to protect biodiversity through area-based strategies (previously Aichi Target 11) covering 30% of marine and terrestrial areas of the Earth by 2030 is not enough for the Amazon. Even with existing protected areas (PAs) covering close to 50% of the area, the business-as-usual scenario raises the risk that the Amazon will reach a tipping point. Indigenous territories (ITs), and the people that live in them, have made a significant contribution to maintaining forests, and serve as buffers to emissions from forest loss compared with regions outside their borders. This presents an opportunity to emphasize the contribution made by Indigenous territories (ITs) to the protection of biodiversity and to consolidate a vision of safeguarding macroregional connectivity in the Amazon.

Abstract

This chapter focuses on recent historical processes (since the 1960s) of two types of management units that are cornerstones of Amazonian conservation: protected areas (PAs) and Indigenous territories (ITs). This historical account is presented from the perspective of the development and institutionalization of the National Systems of Protected Areas or Conservation Units. The recognition of Indigenous territories (ITs) in Amazonian countries, as well as the titling or regularization of these territories, are analyzed here in relation to periods of implementation of state policies that have determined occupation of the Amazon, land-use changes, and demographic composition in these areas. Both in the case of protected areas (PAs) and Indigenous territories (ITs), a summary of the current coverage of different types of protected area (PAs) categories and of recognized and unrecognized Indigenous territories (ITs) is provided.

This chapter also sheds light on other management frameworks that have been developed to explicitly include the presence of traditional Indigenous and non-Indigenous communities, recognizing their right to the sustainable use of forest resources in their settlement. The role of ecological connectivity as a conservation objective is also discussed, and examples of landscape-scale conservation initiatives at the watershed level are provided. Throughout this period, policies for the creation of management categories

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have presented advances and setbacks; however, mounting pressure on Amazon resources, such as unsustainable extraction and more policies favoring conventional development have put at serious risk what Amazonian countries have achieved in more than half a century of conservation policies. In particular, in the last five years, after a decade of declining deforestation, there has been an overall surge in deforestation in Amazonian forests, including inside protected areas (PAs) and Indigenous territories (ITs). This brings back, and more forcefully, the need for a discussion about more effective, innovative views on protected area systems and other effective area-based conservation measures, and the political stakes of the region's governments to honor their conservation commitments.

Keywords: Indigenous territories, protected areas, conservation

16.1 Recent history of Indigenous territories and the designation of protected areas in the Amazon

The socio-environmental dynamic corresponding to the historical period covered in this chapter highlights a common starting point among all the countries that share the Amazon basin. During the first half of the 20th century, or later in some countries, the National Security Doctrine (Buitrago 2002) was the paradigm from which state policies were designed and implemented to guarantee sovereignty in a space that was still disputed between Amazon countries, but also between transnational companies and between the latter and local populations. Therefore, campaigns such as the "Living Frontiers" in the Ecuadorian Amazon or the great "Westward March" in the Brazilian Amazon were promoted, which led to the colonization of "wastelands" and the expansion of the extractive economy in the Amazon (RAISG 2016). This logic of the occupation of wastelands, or uncultivated lands, was followed by institutional frameworks associated with agrarian development, colonization, and deforestation, with the market—formal, but also illegal—for land and tropical timber (RAISG 2015). Therefore, the contemporary process of forest loss was only one of the major impacts of the accelerated process of land-use change in the 20th century; the other was the displacement of Amazon peoples from their ancestrally occupied land. An analysis of the development ideologies of the historical period considered in this chapter and the policy framings stemming from them for the Amazon Is discussed in Chapter 13.

With the Agrarian Reform of 1953 in Bolivia and a few years later, in Colombia, Ecuador, and Peru, the colonized land in the region was distributed to settlers. These circumstances gave rise to schemes of dispossession and trafficking of lands inhabited by Indigenous peoples and other traditional groups, which enabled the concentration of land in parts of the Amazon (RAISG 2016).

Although Peru's 1920 Constitution recognized the legal existence of "Indigenous communities," their legal status, their autonomous makeup, and communal ownership of their lands, these rights did not apply to the Amazon Indigenous peoples until 1974, when the first Law of Native Communities of the Peruvian Amazon was enacted (Decree Law 20653, Law of Native Communities and Pro-motion of the Regions of La Selva and Ceja de Selva, Peru). In 1937, the Ecuadorian government was obliged through the first Communes Law to "protect [these] historical communities," recognizing them as beneficiaries of rural lands by the competent authority. However, this was not the case for the Indigenous populations of the rainforests on the Pacific coast and the Amazon because they did not fit into the farmers' economy scheme, where land is a factor of production, and because of the high level of ignorance and stigmatization of their culture. Later, traditional occupation and community lands were the subjects of legislation, and between 1964 and 1994 communal lands were titled in Ecuador over an area of approximately 40,000 km^2. The Agrarian Development Law (1994) recognized the exercise of collective land ownership and access to land titling. In subsequent years, through different

codifications of this law, forms of access to collective land of ancestral possession were established, and in 2004, Article 49 of the Legalization Law stated that “the State will protect the lands that are destined to the development of the *Montubio*, Indigenous and Afro-Ecuadorian populations and will legalize them through free adjudication to the communities or ethnic groups that have been in their ancestral possession, under the condition that their own traditions, cultural life and social organization are respected." With the recognition of ethnic groups as beneficiaries, in Ecuador, the spectrum of land tenure was opened beyond the scope of the community, making room for the legalization of a territory claimed by a nationality (Ley de Tierras Baldías y Colonización, Codificación de 2004).

Beginning in 1966, Colombia promoted the creation of Indigenous reserves as a form of provisional collective tenure, and by 1977 these reserves began to be legally recognized as *resguardos*. At the end of the 1980s, territorial rights over 200,000 km² in the Colombian Amazon were recognized. The State adopted the legal regime of "Indigenous Reserves" for recognized territories of collective property of the communities, which have the character of being inalienable, imprescriptible, and unseizable (defined in Article 63, 329 of the 1991 Political Constitution); are a legal and socio-political instance of special character, formed by one or more Indigenous communities, which with a collective property title enjoy the guarantees of private property, own their territory and are governed for the management of this territory and their life by their autonomous organizations, protected by the Indigenous jurisdiction and their own normative system. Along with this, the Constitution recognized these Indigenous managed territories as part of the political-administrative structure of the nation.

In Brazil, in the context of the "Westward March'', the pattern for Indigenous land recognition was to distribute small parcels of land to small communities, which was the beginning of a standard of land tenure that became common in the years since then, but not guided strictly by the law, but by different situations of contact with Indigenous peoples and degrees of acculturation. This pattern tried to facilitate a process much desired by the State of incorporation of Indigenous people in agricultural production. Starting in the 1960s, the Indian Protection Service (SPI acronym in Portuguese) played an important role as an Indigenous “heritage manager”, in which context the term Indigenous Land appeared, which would later become part of the Indian Statute in 1973. In 1967, the National Indian Foundation (FUNAI, acronym in Portuguese) was created to fulfill the role of the SPI in the management of Indigenous issues (land, work, and other resources). The creation of FUNAI was framed in the plans of the military government (1964–1984) for development, expansion of the agricultural frontier, and occupation and integration of the Amazon (RAISG 2016).

The Brazilian Federal Constitution of 1988 defines Indigenous Lands as “those inhabited by them on a permanent basis, those used for their productive activities, those indispensable to the preservation of the environmental resources necessary for their well-being, and those necessary for their physical and cultural reproduction, according to their uses, customs, and traditions.” They belong to the Union, the Indians (BRASIL, 1988) have permanent possession and exclusive use of the riches of the soil, rivers, and lakes on the lands, and the State is obliged to promote the recognition of these lands.

The first period of incipient recognition of the Amazon Indigenous peoples and their right to land amid the national colonization of the regions was followed by processes of social organization. At the start of the 1980s in Ecuador, an Amazon confederation, currently CONFENIAE (Confederación de Nacionalidades Indígenas de la Amazonía Ecuatoriana), was consolidated; the same as in Peru with the subsidiaries of regional representative bodies such as AIDESEP (Asociación Interétnica de Desarrollo de la Selva Peruana) and others; in Bolivia the CIDOB (Confederación de Pueblos Indígenas del Oriente Boliviano); in Colombia the regional organization OPIAC (Organización Nacional de los Pueb-

los Indígenas de la Amazonía Colombiana). In Brazil, the regional organization COIAB (Coordenação das Organizações Indígenas da Amazônia Brasileira) was born in 1989 after the 1988 Constitution favored "political representation by delegation" within the Indigenous movement, thus improving dialogue with public institutions, especially to deal with territorial demands (RAISG 2016).

In addition to the demand for the right to land and the reaffirmation of Indigenous cultural identities, an international milestone in the recognition of Indigenous people's rights was the ILO Convention No. 169 in 1989, named Indigenous and Tribal Peoples Convention, ratified by the Amazon States over time.

Towards the beginning of the second half of the 20th century, the institutionalization of areas set aside for the protection of nature was also developing in the countries of the region. It was after the 1940 Pan-American Convention for the Protection of Fauna, Flora and Natural Scenic Beauties (Washington Convention) that several countries advanced with their ratification, towards the creation of the first protected areas. This first effort focused on the protection of transition zones, as in the case of the La Macarena Reserve in Colombia, created in 1948 to protect the significant biological diversity of Andean, Amazon, and Guiana Shield origin. In 1959, the first unit with a strict protection category was created in the Brazilian Amazon (Araguaia National Park), and then in 1960, the first System of National Natural Parks was institutionalized in Colombia. In 1961, Peru established the first protected area in the Peruvian Amazon, Cutervo National Park; Venezuela created the first forest reserve in the Venezuelan Amazon (Imataca); Brazil established new forest reserves in the Brazilian Amazon; and Bolivia created its first Amazon protected area, Isiboro Sécure National Park, in 1965. This was possible soon after in Ecuador, when in 1970, two conservation units were created in the Amazon, both in the Andean–Amazon foothills (RAISG 2016 and Supplemental Information annex).

The designation of protected areas (PAs) in the early twentieth century did not follow a standard, and each nation used its own approach to management. In 1962, during the First World Conference on National Parks in Seattle, the IUCN's newly formed Commission on National Parks and Protected Areas (CNPPA), now the World Commission on Protected Areas (WCPA), presented a paper on nomenclature for the categorization of protected areas (PAs). The Second World Parks Conference in 1972 called on IUCN to define types of protected areas and develop suitable standards and nomenclature for such areas, which was the background to the CNPPA decision to develop and periodically update over time a categories system for protected areas (PAs). This system eventually secured its endorsement by the Convention on Biological Diversity at the 7th Conference of the Parties to the CBD in Kuala Lumpur in February 2004 (Dudley 2008). This endorsement, as well as new norms of conduct entailing commitments from the countries, such as the 1992 Convention on Biological Diversity (CBD), triggered the development of new mechanisms and policy instruments (decrees, regulations, laws, codes or strategies and national programs), now better articulated to a centralized institution responsible for protecting a cultural and natural legacy during developmental processes in the Amazon biome of the countries that occupy the basin. These are the antecedents of the institutionalization of the current national systems of conservation units (SNUC in Brazil) or of protected natural areas (INPARQUES, SNAP, SINANPE or SINAP) in the Andean–Amazon countries.

16.1.1 Protected Natural Areas: Extent of the coverage and categories of protection

In the Amazon basin demarcated for this study, there are currently 571 protected areas (PAs) (Map 1) (RAISG 2020), some with a certain level of overlap between them, which are grouped depending on the administrative type, that is, which entities manage them (national, departmental, municipal, or private), or by the level of environmental protec-

tion or conservation they pursue. In this sense, the protected area where the protection objective is key, the permitted use is called indirect. This type of use permitted would be the equivalent of IUCN categories I, II, and III. Protected areas (PAs) of indirect use include most national parks, natural monuments, nature reserves, among others. In addition, there are protected areas (PAs) for direct use, where the extraction of natural resources is allowed, in principle, under a strategy of sustainable use of the resource. A third type is protected areas (PAs) with indirect/direct use, where internal zoning is what defines what type of territorial management each zone has. This grouping of management categories by type of use is the one used by the RAISG (Amazon Network of Georeferenced Socio-environmental Information), whose database updated through 2020 was used to obtain the figures presented here. The distribution for each country of the Amazon basin, in terms of quantity and surface area, is presented in Table 16.1, calculating the net protected area, without overlap. Guyana, although part of the basin, does not have protection figures in that area.

The protected area in the basin represents 25% of its surface, of which 59.6% is administered at the national level and the remainder at the departmental or state level (Table 16.2). The municipal level and private reserves were not considered due to limitations in access to this information and due to the small area that they represent. By country, the protected proportion varies between 21% and 51%; Peru has the lowest proportion of protection of its national Amazon basin and French Guiana has the highest. On the other hand, 42.2% of the protected surface is under the categories of indirect use, 57.6% is in categories of direct use and the remaining 0.2% in other categories.

The protected areas (PAs) for direct use are made up of a set of 342 units, in five of the seven countries represented in the Amazon basin. Brazil is home to 66% of these areas, grouped into 10 categories, Bolivia 21%, distributed in 27 categories, Peru 11% in six categories and the remaining 2% are held by Colombia and French Guiana. The name or category does not always reflect the type of management that is conferred on it. For example, in the case of Bolivia and French Guiana, there are areas of direct use that are National Parks and Natural Parks, which are considered areas of preservation and indirect use in most of the countries of the basin. To know the actual objective of the PNA in these cases, it is necessary to review their creation objectives and management plans. Furthermore, in Bolivia, protected areas (PAs) recognized by the Constitution can be autonomous Indigenous territorial entities at the same time, and they are not seen as mutually exclusive but even complementary (as is the case in Colombia).

The declaration of protected areas (PAs) in the basin since 1940, when the first was decreed, reached a maximum in terms of number in the period 2000–2009, a trend observed at the national level in Brazil, Bolivia, and French Guiana. In the case of Peru, the periods 2000–2009 and 2010–2019 are equally relevant, due in part to the growth of the protected areas (PAs) of Peru's largest Amazonian department, Loreto, during the period 1999–2018 (Pitman et al. 2021). The exceptions are Colombia and Ecuador, with the most areas created between 2010 and 2019. In the case of Venezuela, the protected areas (PAs) were established prior to 1999.

The growth in the number of protected areas (PAs) can be seen for the basin and for Brazil, reflected in the continued increase in surface area of protected area up to 2009 (Figure 1). However, the correlation does not hold for Bolivia, which, together with Peru and Colombia, had the greatest increase in protected area in the decade 2010–2019 (Figure 16.1). The regional trend over time has been towards an increase in the protected surface area, with the exception of French Guiana and Venezuela, which remained stationary for the last two periods (200-2009 and 2010-2019) and Ecuador with little variation.

In terms of the size of area designated as protected area, most countries have set aside significant extensions well before the 1990s, enacting decrees and laws at various levels to allow the designation,

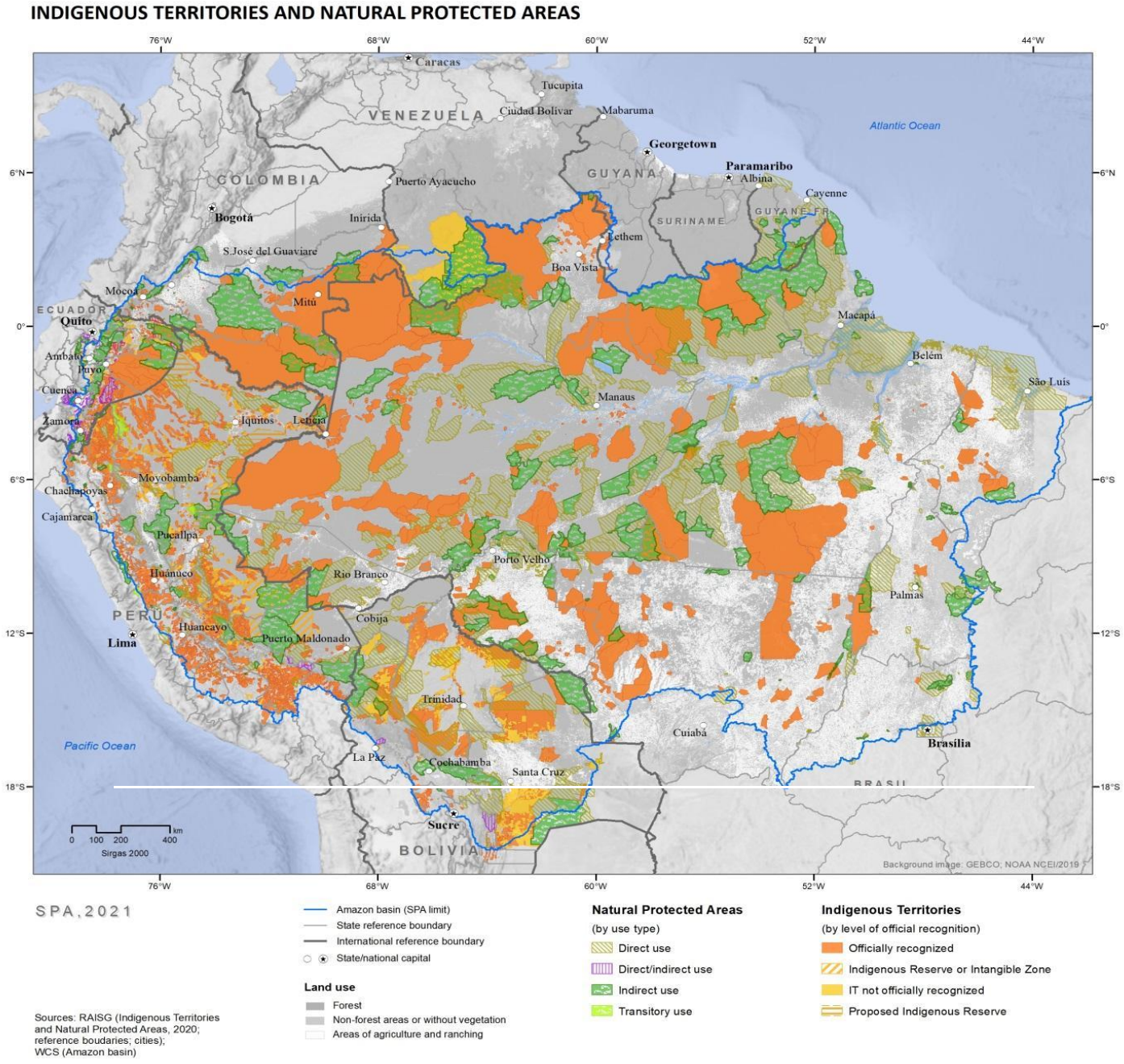

Figure16.1 Historical dynamics of the surface area covered by ANPs in the Amazon basin

Table 16.1 Coverage of Protected Natural Areas in the Amazon Basin

Territorial Unit	Number of Protected Natural Areas	Protected Surface Area without overlap (km^2)[1]	Distribution of total protected area in the Amazon basin (%)	Percentage of the Amazon basin area in each country set aside as protected area
Bolivia	81	216,322	11.9	30.3
Brazil	340	1,226,241	67.4	24.3
Colombia	39	89,091	4.9	26.0
Ecuador	26	35,487	2.6	26.8
French Guiana	5	12,685	0.7	50.7
Peru	66	203,916	11.2	21.1
Venezuela	6	23,838	1.3	46.0
Amazon Basin	563	1,819,368	100.0	24.9

Table 16.2 Protected Areas in the Amazon basin by administrative level and type of management. Percentages reflect the area in each category type relative to the area occupied by the Amazon Basin in each country. The last column (Amazon Basin) provides the percentages for the whole Amazon Basin.

	Percentage %							
ANP	Bolivia	Brazil	Colombia	Ecuador	French Guiana	Peru	Venezuela	Amazon Basin
National total	14.1	13.2	25.7	26.3	51.5	17.8	50.7	15.1
Indirect use	6.8	6.6	25.5	26.3	41.0	10.7	50.7	8.8
Indirect/direct use	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Direct Use	6.8	6.6	0.2	0.0	10.5	6.5	0.0	6.1
Departmental total	16.7	11.8	0.3	0.5	0.0	3.2	0.0	10.2
Indirect Use	0.0	2.6	0.3	0.5	0.0	0.0	0.0	1.8
Direct Use	16.7	9.2	0.0	0.0	0.0	3.2	0.0	8.4
Total	30.7	25.0	26.0	26.8	51.5	20.9	50.7	25.3

administration, and regulation of protected land. Many of the areas were delimited overlapping Indigenous territories, which were not recognized at the time. Another important period of protected area designation and, more importantly, of institutionalization and, therefore, enhanced planning and resourcing of national systems of protected areas (PAs), is clearly associated with the Earth Summit of 1992, which, aside from achieving international commitments from countries of the Basin, favored the political treatment of conservation as an issue of collective interest. Moreover, future national constitutions included the States' obligation to promote the conservation of biological diversity and guarantee for its citizens safe environmental conditions and access to natural resources. Another trigger for protected area designation and enhanced management was the large amounts of international funding for conservation programs specific to the Amazon, for example, the ARPA program in Brazil that started in 2002.

Regarding the administrative competence, we find that the growth of the protected areas (PAs) in departmental areas was greater in the last 20 years than that of the national areas (142% and 101%, respectively), although the national ones represent 60% of the protected surface area in the Basin. This situation needs to be considered to ensure human and financial resources are in place to guarantee the conservation and sustainable use objectives that they were created for.

On the other hand, even though the growth in protected area can be considered an achievement in terms of protection of the Amazon ecosystems, there is a concern associated with the type of use of these protected areas (PAs), as 57.4% is for direct use, that is, they do not have conservation as their primary objective (IUCN categories I-III). In parallel with the designation of new protected area, there has also been a process of downgrading, downsizing and degazettement (See Box 16.1).

The direct use area category corresponds to the smallest overall surface area (40.6%), but this category experienced the highest percentage growth in surface area in the period 2000–2019 (79.8% versus 63.8%) (Table 16.3). In the case of the departmental protected areas (PAs), 82.2% are for direct use. The greater proportional increase in the surface areas for direct use can account for a permissiveness that jeopardizes the conservation objectives within the areas and the connectivity between protected areas (PAs) designated for stricter conservation purposes, as their category is of direct use which does not guaranty effective conservation. The countries in which the protected areas (PAs) for direct use represent a greater area of their total protected area are represented by Brazil and Bolivia. In Brazil, the surface areas for direct use represent 63.1% of the total protected areas (PAs); in Bolivia, it represents 76.4%.

16.1.1.1 An assessment of the degree of effective protection

Evaluating the effectiveness of protected area management is a key element in progress towards the CBD Strategic Plan and its Aichi Targets, especially Target 11, which addresses the contribution of a protected area system that is managed effectively and equitably (Hockings *et al.* 2015). The management effectiveness evaluation refers to: i) design aspects, both of individual sites as well as of protected area systems; ii) adequacy and appropriateness of management systems and processes; and, iii) delivery of protected area objectives (Hockings *et al.* 2006).

In 2008, as part of the regional efforts for the implementation of the Programme of Work on Protected Areas of the Convention on Biological Diversity (PoWPA CBD), the Latin American Technical Cooperation Network on National Parks, other Protected Areas, Wild Flora and Fauna (REDPARQUES, acronym in Spanish) with the support of the CBD Secretariat, WWF, IUCN, the Organization of the Amazon Cooperation Treaty (ACTO), and the Andean Community of Nations joined to launch the program Vi-

sion for the Conservation of the Biological and Cultural Diversity of the Amazon Biome based on Ecosystems (Amazon Conservation Vision). Its mission is to: contribute to the administration and effective management of the national systems of protected areas (PAs); contribute to the maintenance of goods and services, integrity, functionality, and resilience of the Amazon biome against effects of natural and anthropogenic pressures in the context of climate change; and to benefit economies, communities, and biodiversity. The Amazon Conservation Vision has a 2010–2020 Action Plan, structured around the PoWPA elements to comply with the CBD Aichi Targets, and a Strategic Plan for the 2018–2022 period.

In recent years, REDPARQUES has made an outstanding effort to evaluate, at the biome level, the management effectiveness of its protected areas (PAs) with a focus on two objectives contemplated in the PoWPA: objective 1.4, related to improving the planning and management of site-based protected areas (PAs) , and objective 4.2 related to the evaluation and improvement of the effectiveness of protected area management. The results show that in each of these objectives, significant progress was made in creating strategies to strengthen the national systems of protected areas (PAs), facilitating their management and governance, "a factor that has allowed the States to comply with the commitments of the CBD'" (REDPARQUES 2016), even when important gaps have been identified for protection beyond the formally established protected areas (PAs), that is, against representativeness, territories conserved by Indigenous peoples and local communities, and efficiently are observed in light of the highest international standards, as is the case of the IUCN Green List of Protected and Conserved Areas "whose nomination implies the most thorough analysis of world-class management effectiveness standards" (REDPARQUES 2016). Peru achieved two certified Amazon protected areas (PAs) in 2018, the Cordillera Azul National Park and the ECA Amarakaeri. In 2020, seventeen protected areas (PAs) from the Amazon biome in Bolivia, Colombia, Ecuador, and Peru started the certification process for the Green List standard (UICN 2020).

Tools have been developed and applied to analyze the effectiveness of the management of protected areas (PAs) of transboundary territories, such as the Trinational Program for Conservation and Sustainable Development of the Corridor of Protected Areas in Putumayo (Colombia, Peru and Ecuador), 3 mosaics (ecological corridors) in Brazil, the binational corridor Vilcabamba-Amboró (Peru and Bolivia), among others.

In terms of management effectiveness, the Amazon Conservation Vision showed the need to jointly interpret the variables of the national tools from a regional perspective to identify reference indicators that contain elements pertinent to the Amazon countries, to analyze how protected areas (PAs) contribute to the conservation of the biome from a regional perspective (Navarrete 2018). This need was addressed in the protocol for the measurement of management effectiveness of the Amazon biome, where the priorities identified: governance, climate change, evaluation of socio-environmental impacts, management programs, and compliance with the conservation objectives of the protocol, were considered for the components of the IUCN Green List Standard (IUCN et al. 2019).

This protocol, made up of 26 indicators, was applied in 62 Amazon protected areas of Bolivia, Brazil (Acre State), Colombia, Ecuador, and Peru. The main results for the indicators considered a priority are presented in Table 16.4 (REDPARQUES 2019). Based on these results, it is evident that up-to-date management programs (in place) is a theme that presents the least progress at the scale of the Amazon biome, followed by those of climate change and impact assessment. Those with the highest levels of effectiveness at the level of the Amazon biome are related to achievement of the conservation goals and governance.

As a result of the application of the protocol, the following recommendations for success in the management of protected areas (PAs) in the Amazon biome stand out (REDPARQUES 20190):

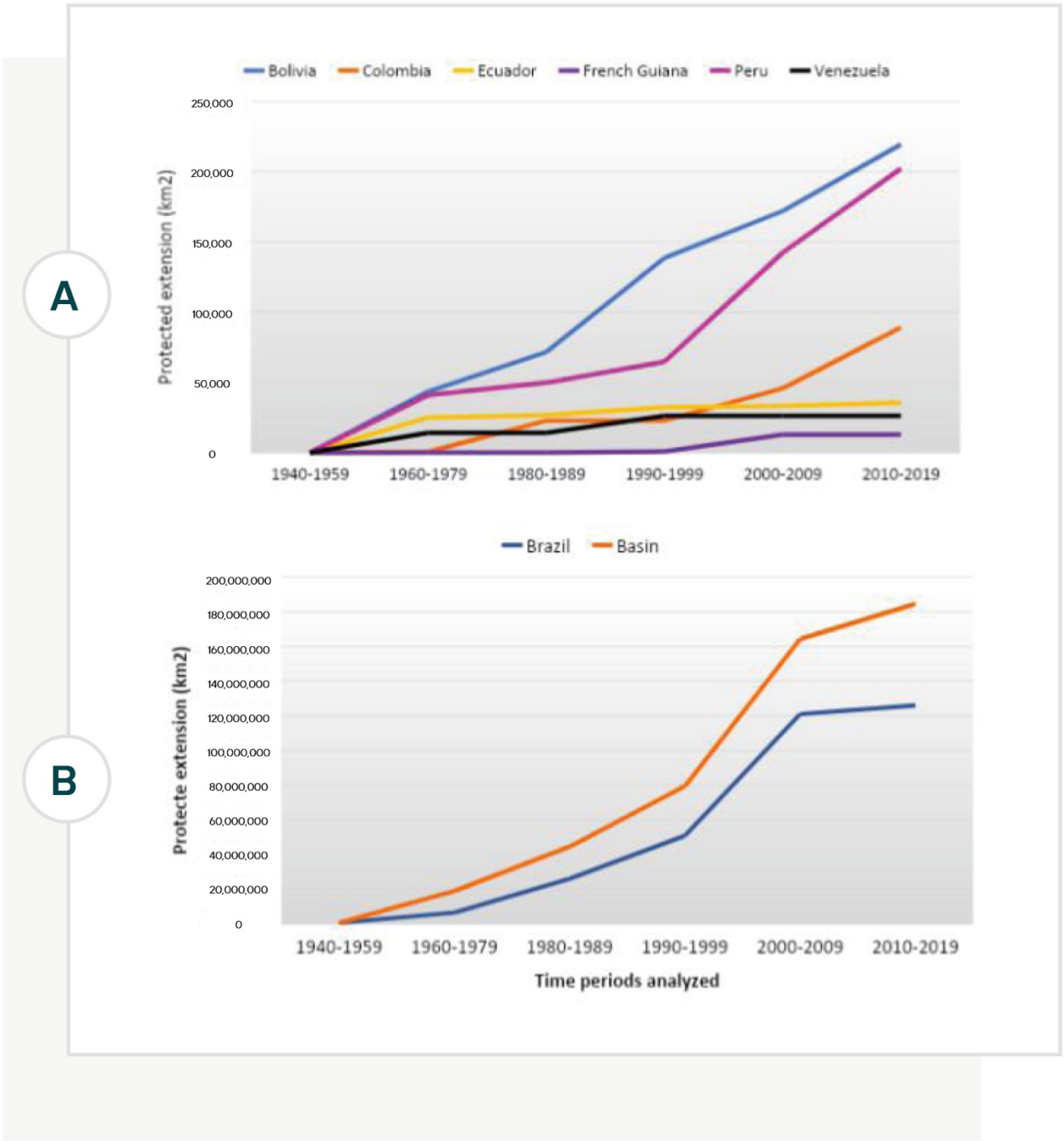

Figure 16.2 Historical dynamics of the surface* (A) area covered by ANPs in the Amazonian countries and (B) area covered by ANPs in Brazil and the Amazon

Box 16.1 Protected areas downgrading, downsizing, and degazettement (PADDD)

In the previous text, changes in the protected areas' limits, size, or category have been briefly mentioned. Studies that have analyzed PADDD, the processes by which protected areas (PAs) have changed in boundaries, reducing their spatial extent, diminished in their protection category, or eliminated over time, have found that historically the world has lost hundreds of thousands of square kilometers of protected land through this process. Here, we review some literature about this process and its effects in more detail for some Amazon countries.

A paper from 2014 (Mascia *et al.* 2014) alerted about this issue around the world. Despite agreements of the Parties to the Convention on Biological Diversity (CBD) to increase the global extent of protected areas (PAs) to 17% of national lands, PADDD has been occurring for years and has grown over time, impacting the achievement of the CBD land protection goal in some countries. Of the three, downsizing is the most common event and appears to be linked to industrial agriculture expansion, local land claims or resettlements, among other multiple causes, whereas mining and infrastructure are the most common causes for the downgrading of protected areas (PAs) (Mascia *et al.* 2014).

Although PADDD could be used as an option for better conservation planning, prioritized allocation of resources (Fuller *et al.* 2010; Kareiva 2010), tradeoffs between competing policy objectives (Bass *et al.* 2010), or the fair recognition of land rights (Dowie 2009), the analysis showed that a majority of PADDD events are a consequence of industrial-scale activities and local pressures (Mascia *et al.* 2014), and far from conservation objectives.

Looking more specifically into the Amazon countries, a study examining PADDD events in Brazil since 1900 (Pack *et al.* 2016) found that 70% of the analyzed PADDD events have occurred since 2005. Forty-eight events affected 88,341 km^2 of protected lands in the Brazilian Amazon. Ten active proposals related to PADDD would alter an additional 65,715 km^2 of conservation units in the Brazilian Amazon, with 42% of this area in strictly protected areas (PAs) and the remaining 58% in sustainable-use protected areas (PAs) .

Again, this study shows that among the enacted PADDD events, area downsizing is the most common and has had the most impact on Amazon protected areas (PAs), as compared with other biomes, with many of the altered sites considered biologically irreplaceable based on their representativeness and vulnerability (Pack *et al.* 2016). PADDD became more prevalent in Brazil since the early 2000s and is linked to hydropower development in 39% of the cases. Within the Brazilian legal Amazon, PADDD has resulted in the removal of 72,136 km^2 of land protected in conservation units, both federal and departmental. Several of the studies cited in Pack *et al.* (2016), Araújo *et al.* (2012), Bernard *et al.* (2014), Ferreira *et al.* (2014) highlight the need for a clear legal process for PADDD. As opposed to the creation of protected areas (PAs), which has well-defined technical and legal steps, the proposal or enactment of PADDD lacks a clear national policy and legally it can proceed without technical studies, solely based on a specific, ad-hoc law (e.g., a decree or provisional measure issued by an authority), all of which impedes transparency of the process. In most cases the process does not include clear geographical documentation about the area to be altered, making it difficult to track the event. In 2018, the Supreme Federal Court of Brazil considered the use of a Provisional Measure to change the category, reduce, or extinguish conservation units to be unconstitutional. The Provisional Measure is an exceptional legislative instrument in the Brazilian legal framework that is based on the relevance and urgency of the

Box 16.1 Protected areas downgrading, downsizing, and degazettement (PADDD) (cont.)

issue in question, has the force of law, determines validity and is edited by the President, and must be approved by the Legislature to become law. Although the decision does not guarantee reversibility to the provisional measures already applied, the judgment of the Direct Action of Unconstitutionality[a] establishes the unconstitutionality of future attempts to use this figure to void the environmental safeguards.

In Ecuador PADDD events, as analyzed by López-Acevedo (2015), have been mostly characterized by the reconfiguration of limits with the aim to exclude extractive areas from protected areas (PAs). As a result, the extent of the affected protected areas (PAs) ended up being larger, though not necessarily a better fit for conservation. There have also been elimination of protected forests to allow for mining concessions. According to the Environmental Code in force, "if necessary and considering the results of such technical evaluations, the National Environmental Authority may re-delimit them [the protected areas] or change their category under technical considerations, as appropriate." This leaves rather open the legal procedure for any PADDD event, especially in terms of the discretionary decision by the environmental authority.

In Peru, any modification of a national-level protected area can only be enacted through a law issued by the national congress (RAISG 2016). As of 2016, two events have occurred in the Peruvian Amazon-protected areas (PAs). One resulted in the subdivision of an existing reserve (transitory category) in three types of protected land, but downsizing the initial extent of the reserve. The area eliminated was concessioned to mining companies (Decreto Supremo No. 023-2007-AG).

For Colombia and Venezuela, there are no reports of PADDD events in their protected areas (PAs).

- Strengthen shared management agreements (established and signed) between the administration of protected area (PAs) and local communities/traditional authorities that favor the implementation of conflict resolution mechanisms.
- Strengthen the perception of protected area (PAs) as a source of benefits for local communities and direct users and strengthen the concerted mechanisms for the distribution of benefits.

- Implement sustainable and productive economic alternatives within the protected areas (PAs) and in their area of influence, improving the quality of life of local people.
- Generate information applicable to management, which enables validation on the state of biodiversity conservation and the cultural value of protected areas (PAs).
- Improve institutional capacities for the management and handling of protected areas (PAs), considering the implications in terms of governance.
- Implement land use planning strategies that focus the management of the protected areas (PAs) on their integration with the regional context, favoring connectivity, biological corridors, and conservation at the landscape scale; and,
  Visualize protected areas (PAs) as strategies for adaptation and conservation in the face of climate change and promote the generation of inclusion mechanisms at the regional level to strengthen management around climate change and its impacts.

Table 16.3 Growth by periods in the area protected (%) in the Amazon Basin considering the administrative level and type of use (protection category).

	Time period		
	1980-1999	2000-2020	Total
National	19.7	39.8	59.6
Indirect use	12.6	22.3	34.9
Indirect/direct use	0.03	0.14	0.2
Direct use	7.1	17.1	24.2
Departmental	11.8	28.6	40.4
Indirect use	0.4	6.8	7.2
Direct use	11.4	21.8	33.3
Total	31.5	68.5	100.0

Table 16.4 Level of progress in the management effectiveness at the scale of the Amazon biome based on thematic priority (in percentage, from the sample of 62 evaluated PA). Created from the data reported in REDPARQUES - IAPA Project (2019).

Themes	Progress Level (%)				
	High Level	Medium Progress	Low Progress	Limited Progress	n/a
Governance	52	32	8	5	3
Climate Change	37	6	0	0	57
Assessment of socio-environmental impacts	45	48	2	5	0
Management programs (management strategies)	26	55	13	2	4
Achievement of the conservation goals of PA	89	3	2	0	6

This set of recommendations that emerged from a biome-specific analysis indicates that what is most lacking in the Amazon is the implementation of an integrated conservation vision, where protected areas (PAs) together with other effective area-based conservation measures (OECMs) are planned with well-defined goals for biodiversity and ecosystem services conservation, co-managed with the local communities, and involve private stakeholders and other sub-national and local forms of government. Information to design effective site networks exists for the Amazon and elsewhere (Prüssmann *et al.* 2017; RAISG 2020; Maxwell *et al.* 2020). The constituent parts for this kind of conservation network are abundant in the Amazon given the extent of protected areas (PAs) and Indigenous territories (ITs) coverage, intact forests, and other private and community-based conservation and sustainable use areas. However, there are significant challenges, particularly those related with protected area resourcing and biodiversity protection effectiveness tracking (Maxwell *et al.* 2020). Based on the significant correlation between protected area resources (budget and staffing) and positive changes in vertebrate abundance (Geldmann et al. 2018 in Coad *et al.* 2019), an analysis comparing protected areas (PAs) of four biogeographical realms of the world (excluding North America, Western Europe and Australia), in terms of adequacy of resources, found that protected areas (PAs) of ecoregions in the Neotropics had the lowest scores (Coad *et al.* 2019). When geographic

ranges of thousands of vertebrate species were overlapped with the scored protected areas (PAs), results show that only a very low percentage of the species are adequately protected: using simple protected area coverage metrics to measure progress toward Target 11 of Convention on Biological Diversity, under the assumption that all protected areas (PAs) are effective, is likely to overestimate effectively protected area coverage by approximately 400% and vertebrate species representation by up to 700% (Coad *et al.* 2019). For the Amazon region, Prüssmann *et al.* (2017) show that there is a reduced number and extension of protected areas (PAs) with strict conservation categories (IUCN categories Ia and Ib). In some countries in the Amazon region, these categories are even non-existent. On the other hand, Category VI, which allows sustainable use of natural resources, is the category most implemented within the region, as also indicated above in Section 1.1. Aggravating the situation, the current economic downturn in the region's nations, combined with low political priority given to environmental conservation issues, could widen the financing gap of all protected areas (PAs) in the Amazon. The magnitude of threats that currently affect protected areas (PAs) is discussed in Section 1.3 of this chapter.

16.1.2 Indigenous Territories

16.1.2.1 Indigenous territories governance as a conservation example

Ensuring the integrity of the ecosystem in the Amazon is a global priority in the environmental crisis we are experiencing today. For this, it is essential to understand the close link between ecological dynamics and the knowledge and territorial management systems of Indigenous peoples who have inhabited the region for thousands of years, ensuring the conservation of vast territories. This section begins with the definition of the concept of Indigenous territory, which will enable a better understanding and contextualization of its content.

Article 13 of Convention 169 of the International Labor Organization, which is a guiding force in these matters since the countries of the region ratified the Convention, highlights that territory means "the entire habitat of the regions that the peoples in question occupy or use in any other way." In Brazil's Federal Constitution (1988), the lands traditionally occupied by Indigenous people are those "they permanently inhabit, those used for their productive activities, those essential for the preservation of the environmental resources necessary for their well-being and for their physical and cultural reproduction, according to their uses, customs, and traditions." Colombian legislation (Decree 2,166 of 1995. Law 160 of 1994) specifies that Indigenous territories are "areas owned regularly and permanently by an Indigenous peoples group and those that, although not controlled that way, constitute the traditional scope of their social, economic, and cultural activities."

Indigenous peoples' groups have traditionally and immemorially occupied a territory they consider their own. According to this cultural worldview, this original Indigenous territory was predestined to each group by the creators and bequeathed to each group by their direct ancestors. From this perspective, Indigenous territory refers to the ancestral territorial jurisdiction of each ethnic group. Roughly speaking, the peoples that identify themselves as part of these jurisdictions recognize them as territorial spaces culturally defined by their knowledge systems expressed in their historical origin. In turn, the continuous ancestral territories that constitute this macro-Indigenous territory show complementarity in ecological and geographical aspects (ACIMA - Asociación de Capitanes Indígenas del Miritί Amazonas 2018). Most of these systems of traditional thought share "cultural principles" that are related to what the non-Indigenous world has defined as conservation models, since they result in the protection of biodiversity and ecosystems.

According to Fundación Gaia Amazonas (2020a), based on studies in a region of 1.3 million km^2 in the northwest Amazon, connecting areas belonging to two hydrographic basins of the Amazon: basins of the upper Negro–Vaupés River and lower

Table 16.5 Indigenous territories (ITs) in the Amazon Basin

Territorial Unit	Number of ITs	Surface area (km^2)	Distribution of ITs area of the Basin (%)	% of the Amazon Basin recognized as IT
Bolivia	148	189.037	9.6	26.5
Brazil	382	1.153.843	58.6	22.8
Colombia	162	185.852	9.4	54.3
Ecuador	643	73.957	3.8	55.9
French Guiana	4	3.271	0.2	13.1
Peru	5.060	328.183	16.7	34.0
Venezuela	17	29.259	1.5	56.5
Amazon Basin	6.443	1.968.594	100.0	27.0

Caquetá–Japurá, in Colombia and Brazil, the description of the ancestors' journey for the settlement in the areas that these peoples currently occupy is described in the origin stories, which provide precise details that explain the relationship that exists between the territory's geography and traditional knowledge, and daily life practices and rituals of each group. This thinking and management framework constitutes a conservation model that includes deep and detailed geographical knowledge, ancestral population models of the territory, management of sacred sites systems, food systems, and ecological calendars, among other aspects, as the current basis of the governance of Indigenous territories that explains the complex and complete vision of the territory they share (see also Chapter 10). Maintaining the balance of this original ordering implies new generations assuming commitments and responsibilities related to learning management knowledge and respect for the regulatory regimes established in the laws of origins. The latter is one of the main challenges for the conservation of the Amazon, given the share of land under Indigenous management, the growth of its population, lack of income sources, and the increasing tensions within the context of cultural globalization (Chapter 13), accelerated by social media and mobile communications more broadly. Furthermore, the lack of governmental attention paid to these sparsely populated territories exacerbates the risk from increased pressures due to an escalation of illegal activities (e.g., mining, logging, land trafficking, illicit crops) within these territories (processes well explained in Chapter 13, section 3.3).

16.1.2.2 Recognized Indigenous territories: Extent of coverage and state of recognition

There are currently 375 or more Indigenous peoples (Walker *et al.* 2020) in the Amazon, depending on the sources and the geographic limit that is used (RAISG 2020), with a total population estimated at approximately 2 million. If all the other social groups that live there are counted, both in the urban municipal capitals as well as in farmer, black, and *quilombo* settlements, the Amazon is inhabited by more than 40 million people.

In the Amazon Basin demarcated for this study, 6,443 Indigenous Territories (IT) are identified (Map 1) (RAISG 2020), which cover approximately 27% of the region (Map 1, Table 16.5). The country with the highest number of titles of Indigenous Territories is Peru, followed by Ecuador, which, when considering the area, indicates that many are areas with small surface. The average area of Brazil, Venezuela, Bolivia, Colombia, and French Guiana range in decreasing order between 3,021 and 818 km^2. At the other extreme, Peru, Ecuador, and Guyana account for average areas ranging from 65 to 192 km2.

This is indicative of different policies; in the former, Indigenous territories (ITs) are considered as

a large territorial unit, i.e., the macro territories described in the previous section, and in the other case, a reduction is generated, associated with the existing procedures and requirements for their recognition (Peru's case is further explained in Section 1.2.4 of this Chapter).

Four types of classes were identified in the basin regarding the legal recognition of the territories (Table 16.6), of which 89% of the surface area in Indigenous territories (ITs) is officially recognized, 6.5% does not have legal protection, and the remaining 4% covers Indigenous Reserves (proposed or existing) and Intangible Zones. Indigenous Reserves and Intangible Zones (depending on the country) are territories for the protection of Indigenous Peoples in Voluntary Isolation or Indigenous Peoples in Isolation and Initial Contact (PIAV and PIACI, acronyms in Spanish).

At the national level, countries such as Brazil, Colombia, and French Guiana stand out, where all the Indigenous territories are officially recognized. Although in the case of Brazil, this is not quite the case because many of the Indigenous territories (ITs) are in an unfinished process of recognition. Since 1988 in Brazil, the executive power has had the responsibility to complete the demarcation of the Indigenous territory within five years, but this has not occurred timely. Currently, in addition to the demands that have not even had their legal recognition process initiated, there are 114 Indigenous territories (ITs) being reconsidered because, among other things, of the lack of match between the territory identified before 1996 and the actual extent of the claimed ancestral land (Fany Ricardo, *personal communication, Aug2020)*. In contrast, Venezuela only has territories that are not yet considered to be legally recognized.

From a regional historical perspective, before 1970, less than 6% of the total surface area of the Amazon had some type of recognition, mostly concentrated in the Indigenous lands of Brazil (RAISG 2016). In the following two decades, additional areas were recognized in Brazil, Peru, Colombia, and Ecuador under different forms according to existing national regulations. Since the 1990s, extensive surface areas of Indigenous territories (ITs) were recognized in Bolivia, Ecuador, and Peru in response to claims for territorial rights based on the demands of the Indigenous movement— and supporting organizations—at the juncture of 500 years of resistance in 1992 (RAISG 2016). Details of the recent historical context in which the process of recognition and formalization of Indigenous territories in the Amazon countries occurred are discussed in the Supplementary Information Annex and Chapter 10.

Table 16.6 Recognized Indigenous Territories in the Amazon Basin

Country	Officially recognized Indigenous Territory (km²)	Indigenous Territory without official recognition (km²)	Indigenous Reserve or Intangible Zone (km²)	Proposed Indigenous Reserve (km²)
Bolivia	123.208	65.828		
Brazil	1.153.843			
Colombia	185.852			
Ecuador	51.804	10.222	11.931	
Guyana	5.192			
French Guiana	3.271			
Perú	233.510	23.557	29.129	41.988
Venezuela	0	29.223		
Amazon Basin	1.756.716	128.830	41.060	41.988

16.1.2.3 Existing policies for Indigenous Peoples in voluntary isolation (PIAV and PIACI, acronyms in Spanish)

In the region, Brazil is the country with the greatest number of records of the presence of isolated Indigenous peoples, from groups formed by hundreds of people to those reduced to a few survivors (Opas *et al.* 2018). In the Brazilian Amazon, 120 records have been identified, located in 55 Indigenous lands and 24 conservation units, of which 28 have been confirmed. Although not consistent with official Indigenous policy, there are still eight areas with no protection mechanism (Ricardo and Gongora 2019). With the 1987 shift towards the autonomy of Indigenous peoples, FUNAI played an important role as a regional reference in relation to PIAV policies. It was established as official policy in Brazil that "the verification of the existence of isolated Indigenous people does not necessarily determine the obligation to contact them" (Portaria No. 1900 / FUNAI of July 1987). In this way, reversing the logic of the contact agents of previous times, it takes advantage of the information accumulated over decades to identify, demarcate, monitor, and protect the territory of peoples without physical contact with those populations (Torres *et al.* 2021).

In 2018, in the Peruvian Amazon, the Ministry of Culture reported the existence of approximately 7,000 people belonging to 18 Indigenous peoples in a situation of isolation and initial contact (PIACI). Between the 1990s and 2005, five Territorial Reserves were created in Peru in perpetuity, and studies were prepared that proposed the creation of a few others. However, it was not until the 2000s that specific regulations were developed to guarantee the protection of PIACI. Law 28736, approved in May 2006, established that if there is evidence of the presence of PIACI in an area, Indigenous reserves will be created. Article 2 of the regulation defines these areas as "Lands delimited by the Peruvian State, of temporary intangibility, in favor of [the PIACI] [...], and as long as they maintain such situation, to protect their rights, their habitat and the conditions that ensure their existence and integrity as peoples". The emphasis on transience indicates that Reserves are only recognized temporarily or under conditional circumstances. Also, although Article 5 of the law grants intangibility to these areas, Article 6 establishes a series of exceptions to this condition. These provisions are expanded in the regulation of the law, approved in 2007 and modified in 2016 (DS 008-2016-MC), which adds the use of natural resources within the Reserves when the State "... deems it of public necessity". This modification puts the survival of these peoples at risk because there is no clarity regarding the criteria in which a public need is established. Currently, there are three Indigenous Reserves (adjusted from the former Territorial Reserves), two Territorial Reserves, and proposals for the creation of six Indigenous Reserves in the Peruvian Amazon (https://bdpi.cultura.gob.pe/piaci).

As in Brazil, although currently to a different degree, the advance of territorial recognition and the effective work of protection systems in Peru are facing opposing interests from the governments themselves in promoting investment and large infrastructure in the Amazon. Likewise, the protection system for these reserves does not manage to effectively confront activities such as illegal timber extraction and drug trafficking, which are proven to be present in the territories of these peoples, which is a common scenario throughout the Amazon basin (Vaz 2019).

In 1979, Ministerial Agreement MA322 designated the Yasuní National Park (PNY) in Ecuador. During the following years, reports of random encounters and violent or fatal attacks made evident both the presence of uncontacted groups near PNY, and the need to delimitation of an area large enough to ensures their protection. In 1999, Executive Decree ED552 established the Tagaeri Taromenane Intangible Zone (ZITT) in the Eastern portion of the PNY, and banned "...in perpetuity, all kinds of extractive activities" within this area. However, little or nothing was done to effectively protect these groups: the map of oil concessions underwent only small variations, and the farming frontier, tourism, deforestation and illegal logging, the incursions of explorers, religious missions, and adventurers all augmented the threats and pressures to

these territories and worsened pre-existing conflicts with the newly contacted Waorani people. Accordingly, in 2006, the OAS' ICHR (Organization of American States' Interamerican Commission for Human Rights) requested the Ecuadorian government "to adopt effective measures to protect the life and integrity of the people living in voluntary isolation, the Tagaeri-Taromenane", within the ZITT. With ED21872 in 2007, the ZITT limits were created (resulting in an area of 758,051 ha), with a buffer zone of 10 km around it, and a plan of Precautionary Measures for the protection of uncontacted groups was designed and implemented through a national policy. In 2008, the national Constitution (article 57) declared the ancestral and irreducible possession of their territories; however, in 2013, the National Congress approved a resolution declaring oil exploitation within blocks 31 and 43 of national interest; these blocks partially overlap with the northeastern areas of the ZITT. In 2018, a national consultation process approved an increase of at least 50,000 ha in the ZITTs area, which granted a total area of 818,501ha to the ZITT, but also altered and abolished various articles from the ED21872 of 2007, allowing hydrocarbon perforation and exploitation platforms within the buffer zone.

16.1.2.4 Risks to recognized Indigenous territories and other conservation policies due to recent policy changes: Cases from Brazil and Peru

Brazil

Contrary to constitutional rights achieved over many years of struggle by Indigenous and traditional peoples and civil society movements, the current government of Brazil (2019 until present) seeks to eliminate the social, cultural, and material reproduction of Indigenous, *quilombola*, and traditional peoples, including violation of their territorial rights. These rights were unjustly announced as an obstacle for agribusiness and development (Escobar 2018; Ferrante and Fearnside 2019; Araújo 2020; Andrade *et al.* 2021; Vale *et al.* 2021) (see also Chapter 30) given that small-scale agriculture is responsible for most of Brazil's food production, rural employment, and agricultural income (Paulino 2014). The conflict is not about production but comes from the eagerness of access to land under Indigenous tenure to put in action a paradigm shift in public policies. This new paradigm aims to reestablish the ideological, political, and economic project of the period prior to the re-democratization—Federal Constitution of 1988— (see Chapters 13 and 14), in favor not only of agribusiness interests but also of the exploration of the subsoil of Indigenous lands, to weaken their territorial rights while simulating the transformation of Indigenous peoples into some sort of business partners.

In 2019, a drastic proposal for a ministerial structure was presented, and although some points were later revised, the initial proposal subordinated the recognition of Indigenous and *quilombola* territories to the Ministry of Agriculture. In fact, most of the proposals under the actual government are connected to the agribusiness caucus, a historical opponent of the democratization of access to land in Brazil, as widely evidenced (Torres *et al.* 2017; Opas *et al.* 2018; Oliveira 2021; Urzedo and Chatterjee 2021). According to Rajão *et al.* (2020), a small but very destructive portion of the sector poses a threat to the economic prospects of Brazil's agribusiness, in addition to causing regional and global environmental consequences. The proposal for a ministerial structure also tried to eliminate competences over the national natural heritage, whether forests or water resources, and the climate agenda, from the Ministry of Environment, subordinating them to other ministries, in addition to prohibiting the participation of civil society in various councils and collegiate guiding public policies (Brazilian Law Nº 9759/2019). The second restructuring of the Ministry of the Environment during the current government (2019–2022), which took place in 2020, created a specific unit for the theme of concessions, something exceptional in the history of the ministerial structure. In July 2020, an action by the Federal Public Prosecutor's Office (AÇÃO CIVIL DE IMPROBIDADE ADMINISTRATIVA 8ª Vara de Justiça federal 1037665-52.2020.4.01.3400), requested immediate removal of the secretary for

the environment due to administrative improbity, pointing to responsibility for the regulatory disorder through legal and infra-legal changes, the dismantling of transparency, and social participation bodies in resource allocation and inspection processes. The Federal Public Prosecutor's Office considered the secretary to be directly responsible for the dismantling of the country's environmental protection system, which caused an increase in deforestation, fires, illegal mining, and land grabbing.

In 2020, further reorganizations assigned the fight against environmental crimes in the Amazon to the Brazilian army, a role previously played successfully by IBAMA and ICMBio. These bodies were responsible for the conception and operationalization of a system of integral inspection that led to the historical reduction of deforestation between 2004 and 2009, and the demobilization of the logistics of the criminal network involved. Since 2014, public investments in environmental issues have declined, and protected areas (PAs) have been directly affected by this trend: the coordinated audit in Amazon conservation units carried out by the Federal Audit Court pointed out that only 4% of federal and state conservation units in the Legal Amazon had a high degree of implementation, indicating that insufficient financial resources were one of the main causes of this situation. Nevertheless, according to historical analysis of the mandatory and discretionary budget for the Ministry of the Environment and related entities, the expenditure forecast for 2021 was the lowest in two decades, with a 27.4% drop in the federal budget for environmental inspection and fighting forest fires in comparison with what was authorized in 2020, and 34.5% compared with 2019.

Also, in recent years, the perception of impunity has led to increased illegal activities such as deforestation and gold mining. These activities drive violence in the countryside, which grew 23% from 2018 to 2019, adding up to more than 1,800 conflicts, a record since 1985 (Comissão Pastoral da Terra, 2020). In the last six years, Brazil was among the most lethal countries for environmental activists (Global Witness, 2019). In 2019, the highest deforestation rate in the last ten years was recorded in the Legal Amazon and preliminary data already indicate that in 2020 (INPE, 2021) the situation is likely to worsen. Illegal mining has also intensified throughout the Amazon: in mid-2020, in the Yanomami IT alone, an estimated 20,000 invaders were estimated, who, in the context of the COVID-19 pandemic, would have the potential to contaminate nearly 40% of the Yanomami, whom they lived close to in the illegal mining areas, a situation denounced by Indigenous organizations in the National Human Rights Council of the ICHR (Interamerican Commission of Huma Rights. Resolution 35/2020. MC No. 563-20).

Peru

As of 1978, the New Law of Native Communities grants ownership to native communities only of those areas that prove to be suitable for agriculture in their demarcated territory, while lands suitable for forestry and protection remain under the ownership of the State; however, they are ceded in perpetuity to the communities. These actions take place within the framework of the Forestry and Wildlife Law, enacted in 1975, one year after the previous Law of Native Communities. The Forestry Law, in order to conserve tropical forests, states in its article 1 that "Forest resources and wildlife are in the public domain and there are no acquired rights over them", which implies that land titling of and with forestry aptitude cannot be granted, reserving the said lands for the State. From the perspective of Indigenous organizations, this constituted a direct violation of the rights of Indigenous peoples: first, the economy of these peoples in the Amazon largely depends on the extensive use of the forest, and second, practically all the lands of the great plain of the Peruvian Amazon are of "forestry aptitude" and are therefore excluded from being granted in private property to the Indigenous peoples. Likewise, the territorial rights of Indigenous peoples are only specific to the lands, not granting any rights over forests, bodies of water, and subsoil, which continue to be

the property of the nation. The processes of recognition and titling of communal lands have been institutionalized since 1975 with the Law of Native Communities. In the first decade of its observance, only small communal areas were titled; since the mid-1980s, communities have succeeded in titling larger spaces (up to 500 km^2) owing to pressure from Indigenous organizations and supporting organizations, which now amount to a substantial fraction of the region (see Section 2.2.2 of this Chapter). However, the titling processes have continued to be slow for several reasons, including successive regulatory adjustments that have legal loopholes or excessively complicate the titling processes. This has generated numerous socio-environmental conflicts motivated by the overlapping of various rights, mostly extractive concessions and easements on the communities' territories.

16.1.3 Conflicting policies and threats to protected areas and Indigenous territories

In all the Amazon countries, the transfer of ownership in favor of individual or communal owners can be reversed if a priority interest for the nation is alleged. In fact, the most common conflict that occurs in recognized territories is due to the overlapping of concessions for extractive industries or infrastructure, which impacts the rights of the owners in various ways (see Chapter 16). According to Convention 169 of the International Labor Organization and the United Nations Declaration on the Rights of Indigenous Peoples, the Indigenous peoples are entitled to be consulted by States through culturally appropriate procedures, through a process called Free, Prior and Informed Consent (FPIC) on all laws, projects, strategies, or other works that affect their territories and their lives. As an international legal framework, both Convention 169 and the UN Declaration affirm that the objective of consulting Indigenous Peoples is to obtain their agreement or consent. The consulted Indigenous peoples should have the possibility to modify the initial plan, and the States have two important duties. 1. The duty of accommodation: it is the duty to adjust or even cancel plans or projects based on the results of the consultation process. When it does not comply with this duty of accommodation, the State must provide objective and reasonable justifications for not having done so. 2. The duty to approve reasoned decisions: although not all consultation processes seek consent, this does not reduce them to a simple formality. States should take into consideration the concerns, demands, and proposals of the impacted Indigenous peoples and consider them in the final design of the plan or project.

The reality is that due to the absence of clear regulations at the national level, in most cases, the consultation process is reduced to a mere notification or informing of the decisions already taken, or it is carried out by dividing Indigenous organizations (government or corporate agents that commonly create divisions within Indigenous organizations and promote the fraction that is allied to the extractive industry). News about this type of conflict is frequently found in the public media in the region.

In the *Amazonia Under Pressure Atlas* (RAISG 2020), the pressures exerted on Indigenous territories (ITs) and protected natural areas owing to the advances of extractive activities and infrastructure development (i.e., energy and roads) are systematically analyzed. The analysis shows that in the case of protected natural areas, 51% of their extent is under some type of pressure, the majority with moderate or low rates. The panorama is similar in Indigenous territories, 48% of which experience pressure, with a third of Indigenous lands having more than half of their area with high and very high rates of pressure.

These regional data present differences by country, and although the *Atlas* (RAISG 2020) indicates Ecuador as the most dramatic case owing to the prevalence of moderate, high, and very high-pressure rates in its Indigenous territories and protected natural areas, there are conflicts in the Indigenous territories (ITs) and protected areas (PAs) of all Amazon nations.

The expansion of the agricultural frontier is one of the drivers of change towards protected areas. The

Atlas (RAISG 2020) indicates that between 2001 and 2018, the increase in new areas of agricultural use within the protected natural areas was more than 220%, transforming 53,269 km^2 inside protected areas (PAs), 74% of which had forest cover in 2000. Sixty-four percent of this conversion took place in departmental protected area of direct use, a category that represents 33% of the total protected extent in the region. Although protected area of direct use can allow the sustainable use of resources, the question here is forest conversion and land-use change. Considering that across the basin, the growth of departmental protected area was greater in the last 20 years than that of the national protected area (142% and 101%, respectively) (Section 2.1. this Chapter), both this trend and the conversion inside should be a matter of concern. The increase in deforestation has also occurred on Indigenous territories (ITs) of which 42,860 km^2 have been converted into new areas of agricultural use, of which 71% were forests in 2000. Despite fluctuations over this period (2000–2018), the figures of annual deforestation in ITs varied between 1,000 and 1,700 km^2 until 2016, but in 2017 and 2018, they exceed all the preceding annual values including the 2004 peak, with values of 2,500 km^2 and 2,600 km^2, respectively (MAPBIOMAS 2020).

Many of these transformations begin illegally with the invasion or land grabbing by external agents, who then try to regulate the property. This situation highlights the need for greater control over land use, the urgent need for rural cadasters, the improvement of production practices to increase productivity and avoid encroachment, and, foremost, adequate management of areas designated for protection or sustainable management.

16.2 Comparative patterns of forest conversion and degradation within protected areas and Indigenous territories and lands outside

Unlike protected areas (PAs), the main objective of which is biodiversity conservation, the aim of establishing Indigenous territories is to safeguard the rights of Indigenous peoples to their lands and livelihoods for social, cultural, and equity reasons (Maretti *et al.* 2014). However, there is sufficient evidence in the scientific literature to corroborate that the Indigenous peoples of the Amazon play a measurable and significant role in maintaining forests, thus reducing forest carbon emissions and mitigating climate change (Ricketts *et al.* 2010). Several studies have shown that Indigenous territories in the Amazon act as buffers for external pressures associated with the expansion of the agricultural frontier, reducing deforestation (Oliveira *et al.* 2007; Soares-Filho *et al.* 2010; Schwartzman *et al.* 2013; Stevens *et al.* 2014; Jusys 2018) and the occurrence of fires (Nepstad *et al.* 2006) compared with the areas outside its limits. Between 2000 and 2018, 87% of the total deforested area was located outside Indigenous territories (ITs)and protected areas (PAs) and 13% within their limits (MAPBIOMAS 2020), even though the protected areas (PAs) and the Indigenous territories (ITs) together cover more than half of the region's forests (Walker *et al.* 2020). Blackman and Veit (2018) combined regression analysis and cross-sectional correspondence to estimate avoided deforestation and carbon emissions attributable to Indigenous management. The authors found that Indigenous peoples' land-use practices reduced deforestation and associated carbon emissions.

In RAISG's Atlas (2020), the analysis of deforestation from 2000 to 2018 indicates that as of 2015 there has been a clear upward deforestation trend in the Amazon, after reaching its lowest point in 2010. Although 87% of the deforestation that occurred in the period took place outside of protected areas (PAs) and Indigenous territories (ITs), 8% and 5%, respectively, occurred in these areas, and the data indicate that 2017 and 2018 were the worst years. Regarding the status of recognition of Indigenous territories, previous RAISG analyses (2016) found that deforestation in Indigenous territories without legal recognition increased more than 50% between the 2000–2005 period and the 2010–2015 period. Other publications have analyzed the effectiveness to reduce deforestation between those territories that are legally recognized and those that are not and have concluded that the

legal and full recognition of their collective rights is a significant cause for the decrease in deforestation rates within Indigenous territories (ITs) (Blackman *et al.* 2017; Baragwanath and Bayi 2020).

Analysis that focused on carbon gains and losses in the Amazon during the 2003–2016 period (Walker *et al.* 2020), using an update of the data originally published by Baccini *et al.* (2017) and disaggregating the losses into those attributable to the conversion of forests (deforestation) and those due to anthropogenic degradation and natural disturbances, had similar findings. Land outside Indigenous territories (ITs) and protected areas (PAs) (i.e. "Other Land") accounted for approximately 70% of the total carbon losses and almost 90% of the net change, in less than half of the total land area. In contrast, Indigenous territories (ITs) and protected natural areas, which accounted for more than half of the total land area, accounted for only 10% of the net change and 86% of losses on those lands were offset by gains through forest growth. Therefore, there was a nine-fold difference in net carbon loss outside Indigenous territories and protected natural areas (–1,160 MtC) compared with inside (–130 MtC). The authors suggest that the continued regeneration of forests in Indigenous territories has allowed these lands to offset emissions from degradation and disturbance (Walker *et al.* 2020).

16.3 Complementary Conservation Strategies

16.3.1 Conservation including people

16.3.1.1 Communal lands in the National System of Conservation Units of Brazil

To the 12 categories of protected areas (PAs) recognized by Brazil's SNUC, and which correspond to the IUCN classification, can be added other specific categories created at the state level that are not included in Section 1.1. The domain and concession of the land, the possibility and intensity of use of resources, and the degree of conversion of the environment are important guiding axes of the system and vary between these additional categories. Among them, the Extractive Reserve (Resex, acronym in Portuguese), an innovation that arose from the struggle of the organized rubber tappers' movement assisted by partners to deal with the unfair land concentration in Brazil, deserves special mention.

In the context of opposition to the exploitation of family work in the rubber plantations of Acre, the appropriation of public lands, and the clearing of native forests, in 1985, the 1st National Meeting of Rubber Tappers was held in Brasília, the first articulation of greater visibility at the national scene. This is when the National Council of Rubber Tappers was created, of which Chico Mendes became president in 1988, extending alliance circles, spanning the Green Party, Brazilian and foreign non-governmental organizations, and the Union of Indigenous Nations, led by Aílton Krenak, with whom Chico Mendes launched the "Alliance of the Peoples of the Forest" (Almeida 2004). The political and intellectual boldness of the unions and associations stands out, which, based on the systematic reconcentration of land in areas of agrarian reform, proposed an innovative model that rejected individual property titles, affirming the collective right to land and the traditional extractivist occupation rights (Allegretti 2008), an innovation that proved capable to guarantee the local governance of resources, implementing an adaptive governance model of complex systems and a robust institutional arrangement (Dietz *et al.* 2003).

At the same time, but in a different territory, the concept of the Sustainable Development Reserve (RDS acronym in Portuguese) arose from the mobilization on the ecological demands from riverside communities to ban commercial fishing from their territories, which intensified unequal competition, leading to the exhaustion of resources and affecting the local way of life (Lima and Peralta 2017). Its own terminology reflects the historical context of its creation: a post-Rio Summit-92 context, where an attempt to combine conservation and development predominated. Located in the state of Amazonas, RDS Mamirauá was the first of its category in Brazil (Lima and Peralta 2017). Meetings between nuclei of social movements

with different trajectories and livelihoods weaved the possibility of articulation at the national level, spreading the idea of these communal reserves throughout Brazil.

Currently, in Brazil, there are Extractive Reserves in 19 states and the RDS in eight, especially in the Amazon and along the coast, contributing to guarantee the collective rights of populations with diverse organizations and ways of life, such as rubber tappers, fishermen and artisanal fishermen, shellfish gatherers, and Brazil-nut and *babaçu* gatherers, among others. Currently, there are 77 Resex and 26 RDS in the Brazilian Amazon, representing approximately 3% and 2.3% of this territory, respectively. According to the Ministry of the Environment (2015), there were 199 proposals for the creation of new federal protected areas (PAs), of which 97 were Extractive Reserves and 14 were Sustainable Development Reserves all over the country and 72 were proposed for the Amazon (Data requested by the Instituto Socioambiental to the Brazilian Ministry of Environment through protocol 026800008392015 56).

16.3.2 Ecological and sociocultural connectivity policies in the region

16.3.2.1 Connectivity as an object of conservation

Ecological connectivity refers to the uninterrupted movement of species and the flow of natural processes that sustain life on Earth (Taylor *et al.* 1993), a condition without which ecosystems cannot function adequately. Therefore, without it, biodiversity and other essential elements for life are put at risk.

Since the 1970s, the way in which isolated areas of the forest lose their functionality and how their biological diversity deteriorates has been proven, with serious consequences for ecosystems, their functioning, their regulatory capacity, and therefore environmental services (Tollefson 2013). Furthermore, connectivity decreases the rate of extinction, enabling species transit, seed dispersal, gene flow, and colonization of suitable sites (Noss 1992). Along with this, it facilitates seasonal and daily migrations between a variety of habitats, contributes to the preservation of biodiversity and ecosystems, the protection of water resources, balancing of the climate, and the recovery of the landscape (Beier and Noss 1998)- all of which are key conditions to enable adaptation in a climate change context.

Although a significant percentage of protected areas (PAs) are not connected, those that are connected may be connected by nearby or contiguous protected areas (PAs), or by unprotected areas. The loss of biodiversity within protected areas (PAs) continues to be high due to the possible lack of connectivity with other protected areas, limiting or impeding the interaction with other populations and natural habitats (Saura *et al.* 2017).

Therefore, it is widely recognized that increasing connectivity in protected area systems is the most urgent and challenging task for conservation strategies and programs. Numerous studies that have analyzed the representativeness and connectivity of protected area systems at a global level have found that although 15% of the land is under some form of protection corresponding to categories I to IV of the IUCN, only 7.5–9.3% of the land has well-connected protected area systems (Castillo *et al.* 2020). To address the global challenge of managing well-connected protected area systems, it is important to re-evaluate the different categories of protected areas (PAs) and the very concept of national protected areas systems, since the range of possible management (Saura *et al.* 2017). For this reason, there is a need to speak of ecological networks for conservation, understood as “a system of habitats (protected areas, other effective conservation measures, and other intact natural areas) connected by ecological corridors, which is established, restored (if necessary) and maintained to conserve biological diversity in systems that have been fragmented” (International Union for Conservation of Nature 2020).

In addition to public lands and protected areas (PAs), measures involving private properties also play an important role in landscape connectivity, as is the case in Brazil, notwithstanding substant-

Box 16.2 Ecological and sociocultural connectivity corridors initiatives and protection figures coordination initiatives

In the Amazon region, various initiatives, policies and programs that seek to guarantee the ecosystem connectivity of landscapes at different scales (national, regional, cross-border) by way of different approaches and societal sectors of society, as well as the coordination of different protection figures and management for conservation and sustainable development, are being implemented (Map 2). These proposals seek to promote the conservation of the ecological and sociocultural connectivity of the Amazon by providing solutions and bringing innovative aspects to conservation management in the Amazon, to respond to the challenges posed by the fragmentation of ecosystems and uncoordinated environmental management. Some of these initiatives are presented below.

Mosaico da Amazônia Oriental (Brazil) - implementation of a participatory and integrated management for the coordination of conservation and sustainable development units

The creation of the Eastern Amazonia Mosaic in Brazil has its origin in a project presented and approved by the National Environment Fund - FNMA (Edital No. 01/2005) in 2006, which is part of the Law and decree instituted by the SNUC in which the mosaics of protected areas are recognized as instruments of integrated management. The Eastern Amazonia Mosaic includes 6 Conservation Units and 3 Indigenous Lands for a total of 12,397,347 ha. In the context of this project, various public institutions of the State of Amapá, civil society organizations, and representatives of the agro-extractivist and Indigenous communities of western Amapá and northern Pará have participated in the effort to develop a proposal to integrate the management of the Conservation Units and other protected areas (PAs) in the region, through a participatory and inclusive management council, in order to implement integrated management that contributes to social, cultural, political, and ecological connectivity between conservation units. (Instituto de Pesquisa e Formação Indigena – Iepé 2017).

Precedents for an Andean-Amazon connectivity regulation. Sangay-Podocarpus connectivity corridor in Ecuador

Since 2014, the Ecuadorean Decentralized Autonomous Governments (GAD, acronym in Spanish) of Azuay, Loja, Zamora Chinchipe, and Morona Santiago, in collaborative work with non-governmental organizations and local populations, have been consolidating a connectivity corridor as a complementary conservation strategy to connect the Sangay National Park, Natural Heritage of Humanity, and the Podocarpus National Park, a core area of the Podocarpus Biosphere Reserve. As a result of this work, the Sangay-Podocarpus Connectivity Corridor (CCSP) was declared as the first corridor in Ecuador in May 2020 by the Ministry of the Environment through a ministerial agreement that also provides the guidelines for the establishment, design, and management of connectivity corridors in the country. This allowed Sangay-Podocarpus to become the first of its kind under the existing environmental regulations (Nature and Culture Ecuador 2020). The CCSP covers an area of 567,067 hectares and is located on the eastern slope of the Andes. The CCSP is an example of how connectivity corridors contribute to guarantee species migration, genetic flow between populations, biodiversity conservation and resilience in degraded ecosystems, enabling species adaptation to climate change. Additionally, the CCSP helps to maintain the ecological connectivity of the Amazon with the Andean region, which presents high degrees of fragmentation, and sets a precedent for the management of regulations for ecosystem connectivity in the countries of the Amazon region.

Box 16.2 Ecological and sociocultural connectivity corridors initiatives and protection figures coordination initiatives (cont.)

Basin approach connectivity. Putumayo Biological and Cultural Corridor Cross-Border Initiative

This is an initiative to bring together the various actors of the four countries that make up the Putumayo basin (Brazil, Colombia, Ecuador, and Peru), integrate the management of protected areas (PAs) and Indigenous territories (ITs), strengthen cultural connections, and ensure a coordinated response to threats to the watershed, which is home to one of the last great intact forests in the world, with more than 75% of the watershed within Indigenous territories, conservation areas, or areas proposed for conservation. Currently, there is a proposal to create three conservation areas in Peru: Medio Putumayo-Algodon, Ere-Campuya-Algodon, and Bajo Putumayo. The corridor has an area of 12 million ha, of which 39% are made up of Indigenous territories (ITs) and 19% are conservation areas. The initiative works on the creation of an advisory council with representatives of national and local governments, Indigenous peoples, local communities, and civil society organizations of the four countries to ensure integrated management of the basin and protect its ecological integrity going forward (Field Museum of Natural History *et al*. 2020).

Initiative for Ecological and Socio-Cultural Connectivity Andes-Amazon-Atlantic

Civil society organizations in the Amazon, regional Indigenous organizations, and governments have been promoting the connectivity of the Amazon with the bioregions of the Andes and the Atlantic coast and strategies to strengthen the ecological and sociocultural connectivity between protection figures. That includes Indigenous territories and areas for sustainable development in the northern part of the Amazon River, which covers approximately 200 million hectares in eight countries and is 67% legally protected. Based on the identification of strategic corridors for connectivity, this initiative seeks to motivate decision makers from the Amazon countries and other actors to implement, through their legal frameworks, existing initiatives and instruments for conservation management and development based on the sustainable use of the forest, participatory programs for the recovery of fragmented ecosystems, the coordination of management between protected areas and the strengthening of the governance of collective territories in order to ensure the connectivity of the Amazon with the Andes and the Atlantic. Based on actions aimed at guaranteeing future socio-cultural and ecological connectivity, the initiative seeks to help the Amazon continue to fulfill its role as a regulatory system for the global climate and as a support system for life on earth. (Fundación Gaia Amazonas 2020b)

tial changes that have weakened Brazil's Forest Code in 2012. In Brazilian Amazonia, 80% of each property in forest areas and 35% in savannah areas are protected under this law, unless the municipality already has over 50% of its area occupied by conservation units or Indigenous lands (Brazilian Forest Code, Law nº 12,651/2012).

16.3.2.2 Recognition of the contribution of Indigenous territories to connectivity

The discussion regarding area-based goals has been a central element in the framework for the formulation of the new global biodiversity goals, since it has been suggested that many of the countries may be overestimating their areas under protection and management by reporting the percentage of the territory under some form of, not necessarily effective, protection (Coad *et al.* 2019; Castillo *et al.* 2020). In this context, it is important to value not only areas under existing IUCN cate-

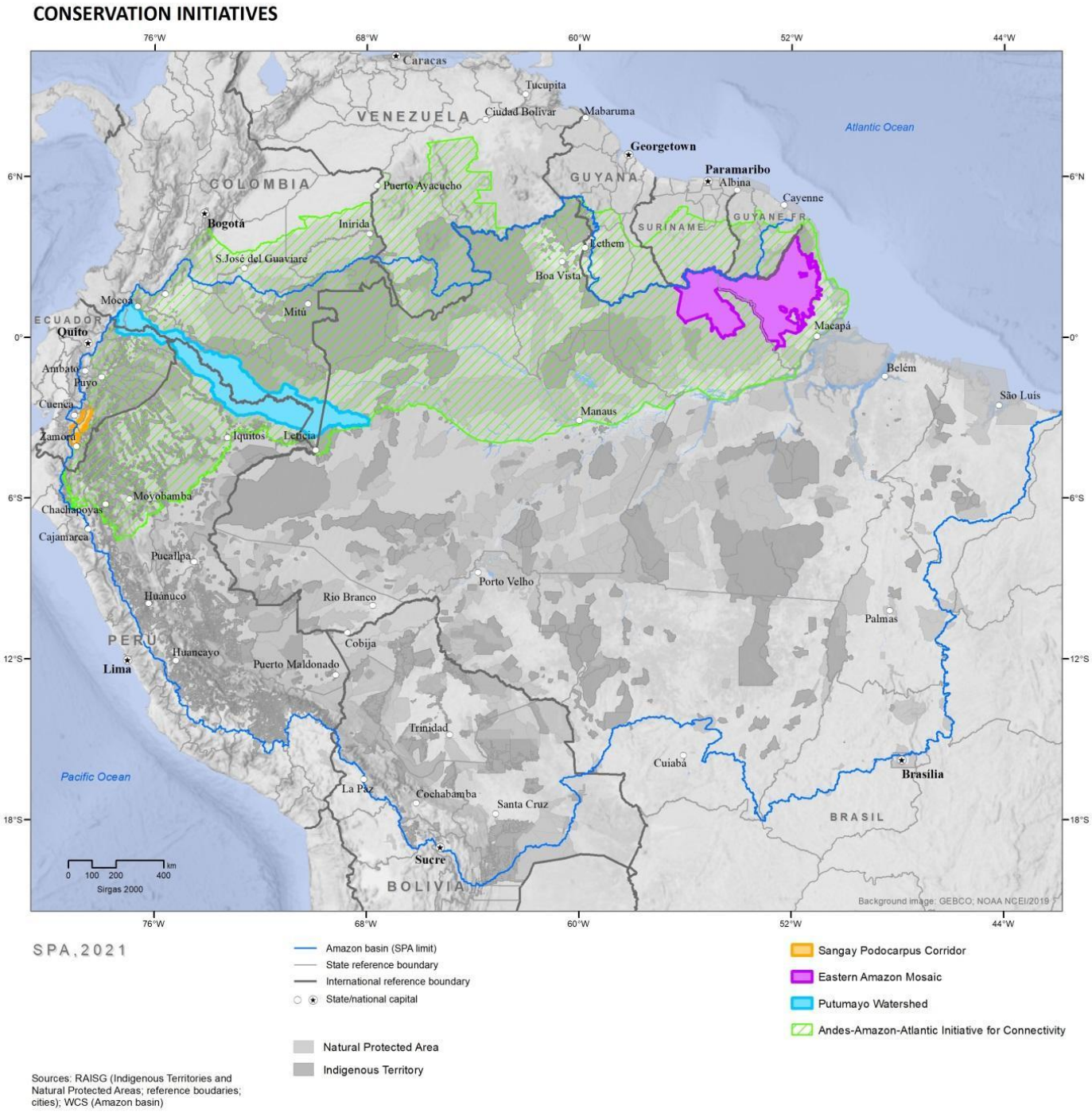

Figure 16.3 Conservation Initiatives across the Amazon Basin

gories that allow the sustainable use of natural resources but also other effective area-based conservation measures, understood as territories that provide effective conservation through various governance and management regimes even though conservation may not be its primary management objective (International Union for Conservation of Nature 2019).

The negotiations of the new post-2020 Framework of the Convention on Biological Diversity, as well as the IPBES Global Report published in 2019, constitute global frameworks that privilege the importance of connectivity as well as the role of Indigenous peoples in the protection of biodiversity.

To date, negotiations (OEWG1 and OEWG2) of the post-2020 CBD Framework have raised key elements for full recognition of the contribution of Indigenous territories to the protection of biodiversity. Evidence of this is collected in Goals 1 and 2, which address area-based goals, reiterating the importance of talking about a) a system of protected areas (PAs) instead of protected areas (PAs) as isolated units to promote a vision of ecosystem connectivity, b) including cultural diversity as well as biological diversity, c) including other effective area-based measures, d) strengthening the importance of effective management (Zero Draft CBD, 2020). These elements reflect the interest in considering both quantitative and qualitative aspects to determine how to constitute ecologically representative and well-connected systems of protected areas (PAs).

16.3.2.3 Connectivity in the Amazon

The widespread interest in raising the commitment of countries with respect to the protection of biodiversity through area-based strategies (previously Aichi Target 11) to 30% in marine and terrestrial areas of the Earth by 2030 presents an opportunity to position the contribution made by Indigenous territories to the protection of biodiversity and to consolidate a vision of safeguarding macro-regional connectivity in the Amazon. The articulation between protected areas (PAs) and Indigenous territories (ITs) constitutes a strategy within the framework of which sustainable-use landscapes, conservation corridors, co*mmun*ity-based conservation areas, and the recognition of other effective conservation measures can be established.

The Amazon has the necessary elements to consolidate connectivity through the coordination of a diversity of management categories related to conservation and sustainable use such as protected areas (PAs), Indigenous territories (ITs) and forest reserves, extractivist reserves, and complementary strategies such as connectivity corridors, among others. In fact, if Indigenous territories are included, 50% of the basin is under some type of recognized or legal protection framework (RAISG 2020 and this Chapter), acknowledging that the Amazon is among the world's biomes that have a high connectivity index (Saura *et al.* 2017). The sum of the efforts that each Amazon country has made independently and because of the adoption and ratification of a series of binational and international agreements constitutes the basis for maintaining connectivity and guaranteeing the functions of the Amazon ecosystems, which are key to the regulation of global climate and protection of biodiversity. However, the continuous transformation of natural landscapes in key areas such as the Andean–Amazon foothills not only affects current connectivity indices, but also compromises the future of the system of protected areas (PAs) as a network (Castillo *et al.* 2020).

International frameworks (post-2020 CBD Framework) have emphasized the importance of building comprehensive conservation plans for large ecoregions or sets of adjacent ecoregions, which are crucial to formulating global goals (Woodley *et al.* 2019). For this reason, today, more than ever, the continuous work that has been carried out in the region by civil society organizations and governments is relevant. This work has resulted in the formulation, design, and implementation of a series of conservation projects and initiatives, policies, and models to ensure the integrity of this region.

Because of the close relationship between Indigenous peoples' ancient system for land management and the comparatively good state of forests in Indigenous territories (ITs), key actors in the region have raised the need to broaden the perspective of connectivity according to this context, towards ecological and socio-cultural connectivity (Box 16.2). This concept is defined by the connections that maintain ecological flows and the representation of the local habitat network necessary for maintaining landscape permeability, biodiversity, the water cycle, climate balance, and the system's resilience as a whole.

16.4 Conclusions

The eight countries of the Basin have traversed a long and fruitful path in recognizing the importance of protecting the biological diversity and associated ecological processes and services of their Amazon regions. After more than 60 years of conservation policies, 25% of the Amazon area is under some category of protection, with percentages ranging from 21% to 51% depending on the country. Many of them are classified as megadiverse countries at a global level because of their Amazon territory. Even with some differences, societies and governments have progressed in the development of policies for the declaration, administration, management, planning, and financing of systems of protected natural areas.

When analyzing the recent historical contexts that have generated the most prolific periods in the declaration of conservation units, we see that many of them are linked, as perhaps is natural in history, to the influence of international political currents and the actions of actors and groups convinced, in this case, of the need to protect biodiversity, its inherent processes and the services it generates for humanity. This has exerted pressure for governments in the region to enact laws and regulatory frameworks favorable to conservation and sustainable development. We must not forget that this region was simultaneously the last frontier in the process of occupation of national territories and that in the conception of the dominant culture, it was considered an empty space to be occupied for the extraction of renewable and non-renewable resources and the expansion of productive activities and colonization spaces.

However, the Amazon is not only forests and exuberant biodiversity but is occupied, and has been for centuries, by a myriad of peoples who have lived there and sustained themselves from the area in practically symbiotic ways, developing ways of using space and the resources by effectively taking advantage of all that diversity. This is the other reality that the Amazon countries and their dominant and mestizo societies have had to face and resolve with respect to this territory. It is in this context that the legal framework for the recognition of the rights of Indigenous peoples is also evolving, including the right to their territories. This process has been more difficult and rugged, but there has also been progress, although 27% of the Amazon territory formally recognized for Indigenous peoples is far from the extent of ancestral occupation that they claim. Besides the local, organized struggle of these peoples that has made the achievements in terms of rights of possession of their communal lands possible, there are advances in international legal frameworks regarding Indigenous rights, which facilitate formal spaces for demands and pressure in the face of injustices committed or to gain participation in decisions that directly affect their rights. The former is numerous, as the recognition of their rights to land is not complete nor includes ownership of subsoil resources, and this has been one of the major causes of conflicts. Furthermore, the use of resources by others has generally left behind the worst part: pollution, transculturation, and very little of the wealth generated for the nation, even in the form of health, sanitation, education, and the development of capacities to function in an ever-changing reality. Despite all this, the recent information that can be derived thanks to the maintenance of better records of the area and of what happens in the protected areas (PAs) and Indigenous territories (ITs) clearly shows evidence that the Indigenous territories (ITs) have worked as well as protected

areas (PAs) to stop the advance of deforestation in the Amazon. In the face of the imminent threats of climate change, the protection provided by Indigenous peoples to the forests in their territories is an invaluable service to humanity and not currently recognized the way it should be.

In a world that is increasingly connected in every way, where in addition to the production of commodities and raw materials, the growing illegal activities also play a disruptive role in the Amazon, it is not enough to recognize Indigenous territories or the extension of declared protected lands. The changes can be risky and precipitous; therefore, new, transparent, participatory, proactive, and creative forms of management and law enforcement based on knowledge, are necessary. This will lead to the safeguarding of key services at national and global scales such as water and food security and climate resilience, while ensuring the protection of biodiversity and enhancing benefits for Indigenous communities.

16.5 Recommendations

The Amazon is one of the biomes with the largest proportion of protected area in the form of protected areas (PAs) of different categories, other effective area-based conservation measures, and undesignated intact natural areas. However, the evaluation of the effectiveness of conservation measures indicates that what is mostly lacking in the Amazon is the implementation of an integral conservation vision in which protected areas (PAs), together with other effective area-based conservation measures (OECMs), are seen as ecological networks for conservation and planned with well-defined goals for the conservation biodiversity and ecosystem services, co-managed with the local communities, and involving private stakeholders and other sub-national and local forms of government. Implementing this vision requires increased funding.

More concrete actions are needed to protect ITs, such as full recognition of the territories and the strengthening of territorial governance as one of the most important strategies to maintain forests and mitigate the impacts of COVID-19 in the Indigenous territories of the Amazon. More balanced and direct funding, and capacity building, for Indigenous peoples' organizations and communities is essential to provide the necessary resources and thus continue to conserve these important forests.

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