Chapter 16 In Brief

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

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

Carmen Josse[a], Silvia de Melo Futada[b], Martin von Hildebrand[c], María Moreno de los Ríos[d], María A. (Tina) Oliveira-Miranda[e], Edel N. de Moraes Tenório[f], Ermeto Tuesta[g]

Key Messages & Recommendations

1) Protected areas (PAs) and Indigenous territories (ITs) occupy approximately 50% of the Amazon basin, showing the great potential of the Amazon to conserve and manage vital ecological connectivity.
2) ITs, PAs, and their inhabitants have contributed significantly to maintaining intact forests; intact forests act as buffers against greenhouse gas emissions from forest loss, maintain the hydroclimatic balance, and preserve biodiversity and ecosystem functioning, as compared to regions outside their borders.
3) Deforestation rates are rising across the region, putting ITs and PAs under renewed pressure.
4) PAs and other effective area-based conservation measures (OECMs) are seen as ecological networks for conservation, and demand plans with well-defined goals for the conservation of biodiversity and ecosystem services, co-management with local communities, and the involvement of private stakeholders and other subnational and local forms of government.
5) More concrete actions are needed to protect ITs, including the full recognition of territories and collective rights, and the strengthening of local governance as one of the most important strategies to maintain forests.
6) Balanced and direct funding, as well as capacity building for Indigenous Peoples' organizations and communities, is essential to provide the necessary resources to continue to conserve and restore forests.

Abstract Two management classifications are the cornerstone of Amazonian conservation: protected areas and Indigenous territories. This chapter focuses on the historical processes, starting in the 1960s, that led to their creation, as well as the contemporary challenges they face and their importance for conservation.

Recent history of the designation of protected areas and the recognition of Indigenous territories in the Amazon During the first half of the 20th century (later in some countries), the National Security Doctrine was the paradigm from which state policies were designed and implemented to guarantee sovereignty in a space that was still disputed between Amazonian countries, but also between transnational companies and between the latter and local populations. The logic of occupation was followed by the institutional framework associated with agrarian development, colonization, and deforestation, with the market – formal, but also illegal – for land and tropical timber[1].

The Agrarian Reform of 1953 in Bolivia, and similar reforms a few years later in Colombia, Ecuador, and Peru, distributed colonized land to settlers. These circumstances gave rise to schemes of expropriation and trafficking of lands inhabited by Indigenous peoples and other local communities, which enabled concentration of land in the hands of settlers in parts of the Amazon[2]. Although Peru's 1920 Constitution recognized the legal existence of "Indigenous communities," their legal status, autonomous composition, and communal ownership of their lands,

[a] Fundación EcoCiencia, San Ignacio E12-143 y Humboldt Edf. Carmen Lucía, Quito 170517, Ecuador, carmenjosse@ecociencia.org
[b] Instituto Socioambiental, Av. Higienópolis, 901, São Paulo, Brazil
[c] Gaia Amazonas, Calle 70A #11-30, Bogotá, Colombia
[d] IUCN, Edificio Murano Plaza, 12th floor, 170515 Quito, Ecuador
[e] Wataniba, Calle Principal de la Urb. Monseñor Segundo García, Casa N° 6, Edo. Amazonas, Venezuela
[f] Memorial Chico Mendes, Rua Teófilo Said, Quadra G nº 05, Conjunto Shangrilla II, Parque Dez. Manaus AM 69054-693, Brazil
[g] Instituto del Bien Común, Jr. Mayta Cápac N° 1329, Jesús María, Lima, Perú

these rights did not apply to the Amazonian Indigenous peoples until 1974, when the first Law of Native Communities of the Peruvian Amazon was enacted. In Ecuador, traditional occupation and community lands were subject to legislation between 1964 and 1994, when communal lands were titled in an area of approximately 40,000 km². The Agrarian Development Law (1994)[3] recognized collective land ownership and titling. From 1966, Colombia promoted the creation of Indigenous reserves as a form of provisional collective tenure, and in 1977 these reserves began to be legally recognized as *resguardos*. In the late 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, which are inalienable, imprescriptible, and unseizable. In Brazil, during the "Westward March'', at the end of the 19th century, 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 following years.

This pattern tried to facilitate a process of integration of Indigenous people through agricultural production, in the scheme of the consolidation of national states which included the consolidation of national borders. Starting in the 1960s, Brazil's Indian Protection Service (SPI) 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 1988, the Brazilian Federal Constitution recognized that Indigenous peoples have permanent possession and exclusive use of the riches of the soil, rivers, and lakes on their lands, and the State is obliged to promote the recognition of these lands.

At the beginning of the second half of the 20th century, countries of the region were also beginning to legally designate areas for the protection of nature. Following the 1940 Pan-American Convention for the Protection of Fauna, Flora and Natural Scenic Beauties (Washington Convention) several countries created their first conservation areas. Initial efforts focused on the protection of transition zones, as in the case of the La Macarena Reserve in Colombia, created in 1948 to protect biological diversity of Andean, Amazonian, and Guianas shield origin. In 1959, Brazil created its first unit in the Amazon. In 1960, the first System of National Natural Parks was institutionalized in Colombia. In 1961, the first protected area was created in the Peruvian Amazonian Andean foothills, the first forest reserve in the Venezuelan Amazon, and lake reserves in the Bolivian lowlands, which gave rise to that country's first Amazonian protected area. In Ecuador, two conservation units were created in 1970 in the Amazonian Andean foothills[2].

Protected areas: Extent of coverage and categories of protection There are 563 protected areas (PAs) in the area of the Amazon covered by this study (Figure 16.1)[4,5]. In 221 of them only indirect uses are permitted, equivalent to IUCN categories I, II, and III. In others, direct use is permitted, including the extraction of natural resources, in principle, under sustainable management practices. A third type of PA allows both indirect and direct uses, with internal zoning defining territorial management. PAs cover 25% of the basin's surface. By country, the protected proportion varies between 21% in Peru and 51% in French Guiana. Categories of indirect use occupy 42.2% of the protected surface, direct use 57.6%, and 0.2% other categories. The PAs for direct use are made up of a set of 342 units, of which the vast majority are in Brazil and Bolivia.

The regional trend over time has been towards an increase in protected area, with the exception of French Guiana and Venezuela, where protected areas have remained stationary for the last two decades, and Ecuador where there has been little variation. While many applaud the growth in protected areas as a success for the preservation of Amazonian biodiversity, there is concern that conservation is not the primary objective in most areas, since 57.6% allow for resource extraction. In parallel, there has also been a process of protected area

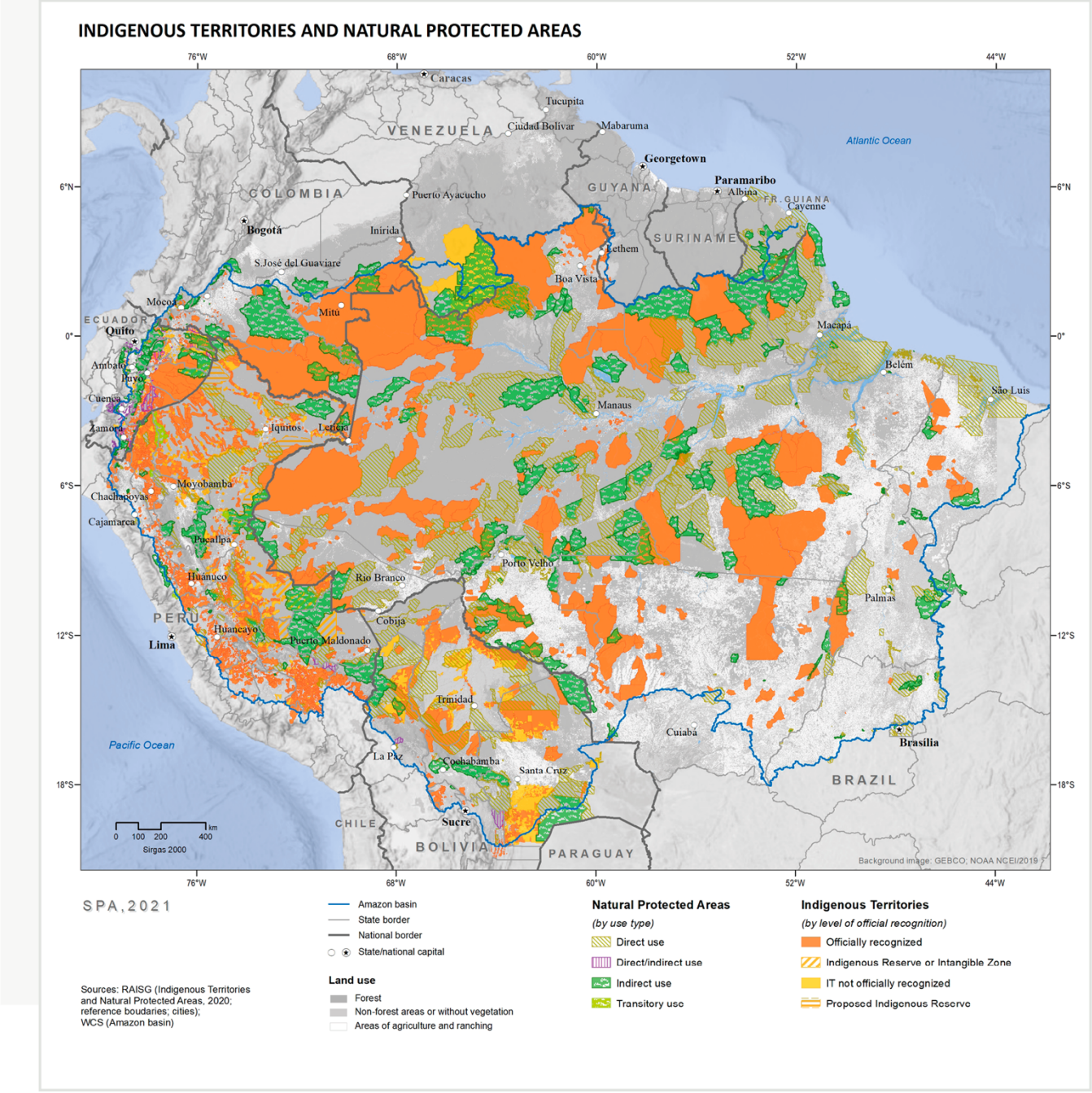

Figure 16.1 Indigenous Territories and Natural Protected Areas (RAISG, 2020[4]). Sources:[5].

downgrading, downsizing, and degazettement[i] (PADDD).

An assessment of the degree to which protection is effective 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), organizations from different Amazonian countries jointly launched the program Vision for the Conservation of the Biological and Cultural Diversity of the Amazon Biome based on Ecosystems. Its mission is to contribute to the administration and effective management of national systems of protected areas and to the maintenance of goods and services, integrity, functionality, and resilience of the Amazon biome to natural and anthropogenic pressures in the context of climate change, to the benefit of economies, communities, and biodiversity.

In recent years, REDPARQUES, a regional cooperation network that seeks to improve the management of protected and conserved areas, has made an effort to evaluate, at the Amazon biome level, the management effectiveness of its protected areas. Their findings show that significant progress was made in creating strategies to strengthen national systems of protected areas, including their management and governance[6], despite important gaps in protection outside of protected areas[7]. Their report, the Amazon Conservation Vision, showed the need to interpret national tools from a regional perspective and identify pertinent indicators to measure the contribution of PAs to regional conservation[8]. They found that, based on a sample of 62 Amazonian protected areas, the main gaps were having in place an effective conservation plan, followed by climate change preparedness and impact assessment, while indicators scoring higher in the contribution to regional conservation where the achievement of conservation goals and good governance schemes. These findings indicate that the region should implement an integrated, region-wide conservation vision, where PAs and other effective area-based conservation measures (OECMs) have well-defined goals for biodiversity and ecosystem services conservation, and are co-managed by local communities, involving private stakeholders and other subnational and local forms of government.

The constituent parts of such a conservation network are abundant in the Amazon, given the extent of PA and IT coverage, intact forests, and other private and community-based conservation and sustainable use areas. However, the challenges are great, particularly adequate resourcing and capacity to monitor and evaluate effectiveness[9]. In the Amazon region[10], few PAs meet strict conservation standards (IUCN categories Ia and Ib). On the other hand, Category VI, which allows for the sustainable use of natural resources, is the most common within the region. Aggravating the situation, the current economic downturn combined with low political will to address to environmental issues may widen the financing gap.

Indigenous territories as a conservation example Article 13 of Convention 169 of the International Labor Organization (ILO) defines territory as "the total environment of the areas which the peoples concerned occupy or otherwise use[11]." 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 and 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 occupied a territory they consider their own. According to this cultural worldview, Indigenous territories were predestined to each group by the creators and

[i] Degazettement can be defined as the loss of legal protection of an entire protected area[28].

bequeathed to each group by their direct ancestors. From this perspective, Indigenous territory refers to the ancestral territorial jurisdiction of each ethnic group. In turn, the continuous ancestral territories that constitute this macro Indigenous territory show complementarity in ecological and geographical aspects[12]. 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 ecosystem functioning. Studies in the Amazon basin have shown[13] that the thought and management framework of some Indigenous peoples constitutes a conservation model that includes deep and detailed geographical knowledge, ancestral population models of the territory, management of sacred sites, food systems, and ecological calendars, among other aspects. These frameworks are the basis of governance of Indigenous territories, which explains the complex and complete vision of the territory they share. Maintaining the balance of this original ordering implies that new generations assume commitments and responsibilities related to learning management and respect for the regulatory regimes established by the ancestors.

Indigenous territories: Extent of coverage and state of recognition There are 410 Indigenous groups in the Amazon with a total estimated population of 2 million, depending on the sources and the geographic limits imposed[4]. If one counts all the other social groups that live in urban areas, as well as in farmer, traditional, and Afro-descendent settlements, the Amazon is currently inhabited by more than 40 million people. In the Amazon Basin, 6,443 ITs are identified[4], which cover approximately 27% of the region (Figure 16.1). The country with the highest number of titles is Peru, followed by Ecuador. In Peru, Ecuador, and Guyana the average area of an IT ranges from 65 to 192 km², with Peru at the lower extreme and Guyana the higher. In Brazil, Venezuela, Bolivia, Colombia, and French Guiana, the average area of territories varies between 818 and 3,021 km², decreasing in the aforementioned order of the countries. This is indicative of different national policies.

In the basin, 89% of the surface area of 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. Brazil, Colombia, and French Guiana stand out for officially recognizing all their ITs; however, in the case of Brazil, this is not quite the case because many of the ITs are still undergoing the process of official demarcation. Since 1988 this responsibility has belonged with the executive branch and they have been required to complete the process within five years; however, this has not occurred in recent years. In contrast, in Venezuela all territories lack legal recognition.

Conflicting policies and threats to protected areas and Indigenous territories In all Amazonian countries, ownership may be transferred from an individual or communal owners if the nation alleges a priority interest. In fact, the most common conflict that occurs in recognized territories is due to overlapping concessions for extractive industries or infrastructure. According to Convention 169 of the ILO and the United Nations Declaration on the Rights of Indigenous Peoples, Indigenous peoples are entitled to culturally-appropriate consultations, also known as free, prior, and informed consent (FPIC) on all laws, projects, strategies, or other works that affect their territories and their lives. Indigenous peoples should have the opportunity to modify planned activities, and States should adjust or even cancel activities based on consultation outcomes. Although not all consultation processes yield consent, this should not reduce them to a simple formality. States must consider the concerns and proposals of impacted Indigenous peoples in the final design of the project. When States do not comply with requests for accommodation, they must provide objective and reasonable justifications for not having done so. Unfortunately, in reality there are not clear regulations on FPIC at the national level, and in most cases the process is reduced to a mere notification of decisions already taken. Another tactic is to heighten

division within Indigenous organizations and get consent from those most amenable. It is estimated that 51% of PAs are under some type of pressure, the majority with moderate or low rates. Indigenous territories are similar, with 48% facing pressure, and one third having high to very high rates of pressure from extractive activities and infrastructure development (i.e., energy and roads) on more than half of their area[4]. The case of Ecuador is the most dramatic[4], but there are conflicts in all Amazonian nations. In addition, between 2001 and 2018 new areas of agricultural use within PAs increased by more than 220% and covered 53,269 km², 74% of which had forest cover in 2000. Deforestation has also increased on Indigenous territories, where 42,860 km² were converted into new areas of agricultural use, of which 71% was forest in 2000. Annual deforestation in all ITs of the Amazon varied between 1,000 and 1,700 km² between 2001 and 2016, but rose significantly in 2017 and 2018 to 2,500 km² and 2,600 km², respectively[14].

Patterns of forest conversion and degradation within protected areas and Indigenous territories as compared with lands outside Indigenous territories in the Amazon act as buffers against external pressures associated with the expansion of the agricultural frontier, reducing deforestation[15–19] and fires[20], compared to the areas outside their limits. Between 2000 and 2018, only 13% of the total deforested area was located inside ITs and PAs[14], even though they collectively cover more than half of the region's forests[21]. Analysis of deforestation from 2000 to 2018 indicates that, beginning in 2015, there was a clear upward trend in deforestation, following a record low in 2010[4]. Although 87% of the deforestation that occurred took place outside of PAs and ITs, respectively, 8% and 5% occurred in these units, with 2017 and 2018 the worst years. Comparative analyses of deforestation in legally recognized territories versus unrecognized ones conclude that full legal recognition significantly reduces deforestation rates within Indigenous territories[22,23]. An analysis of carbon gains and losses in the Amazon during the 2003-2016 period[21] shows that land outside ITs and PAs accounted for about 70% of total carbon losses and almost 90% of the net change, on less than half of the total land area. In contrast, ITs and Pas accounted for only 10% of the net change, and 86% of losses on those lands were offset by gains through forest growth. Thus, there was a nine-fold difference in net carbon loss from land inside Indigenous territories and protected areas (-1,160 MtC) as compared to land outside (-130 MtC).

Ecological and sociocultural connectivity policies in the region Since the 1970s scientists have come to understand the ways in which isolated, fragmented areas of forest lose their functionality and biological diversity. This has serious consequences for ecosystems and their functioning, regulatory capacity, and environmental services[24,25]. Thus, it is widely recognized that increasing connectivity between protected areas is the most urgent and challenging task for conservation. Numerous studies have analyzed the representativeness and connectivity of protected area systems at a global level, finding that although 15% of land is under some form of protection corresponding to IUCN categories I to IV, only 7.5-9.3% of the land is well-connected[26]. To address the global challenge of managing well-connected systems of protected areas, it is important to re-evaluate the different categories of protected areas and the very concept of national protected areas, to integrate a wider range of protection and management classes, including private and communal lands, into the systems[25]. For this reason there is a need to speak of ecological networks for conservation, or “a system of habitats” including protected areas, other effective conservation measures, and other intact natural areas connected by established and maintained (or restored if necessary) ecological corridors which can sustain biological diversity in fragmented systems[27].

The Amazon has the necessary elements to consolidate connectivity through the coordination of different kinds of conservation areas and land uses, including protected areas, Indigenous territories, forest reserves, extractivist reserves, and connectivity corridors. The sum of the efforts each Amazonian country has made independently and through multinational (or bilateral) agreements constitutes the

basis for maintaining connectivity and guaranteeing the functions of the Amazonian ecosystems. However, the continuous transformation of natural landscapes in key areas such as the Andean-Amazonian foothills not only affects current connectivity indices, but also compromises the future connectivity of the system of protected areas[26].

Conclusions The eight countries and one overseas territory of the Amazon 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 Amazonian regions. After more than 60 years of conservation policies, the Amazon has 25% of its area under some category of protection, with percentages ranging from 21% to 51% depending on the country. Many of these countries are classified as megadiverse at the global level thanks to their Amazonian territory. Even with some differences, society and governments have progressed in the development of policies for the declaration, management, and planning of systems of protected areas. Despite recent increases in deforestation and invasions within PAs and ITs, better data availability for recent decades allows researchers to understand trends, and clearly shows that these areas are effective in preventing deforestation.

References

1. RAISG. *Deforestación en la Amazonía. 1970-2013*. (RAISG Red Amazónica de Información Socioambiental Georreferenciada, 2015).
2. RAISG. Cartografía Histórica de Áreas Naturales Protegidas y Territorios Indígenas en la Amazonia. Sao Paulo. Red Amazónica de Información Socioambiental Georreferenciada. (2016).
3. Ecuador. *Ley de desarrollo Agrario. Registro Oficial Agosto 15*. (1994).
4. RAISG. *Amazonia Under Pressure*. (© Amazonian Network of Georeferenced Socio-enviromental Information, 2020).
5. Venticinque, E. *et al.* An explicit GIS-based river basin framework for aquatic ecosystem conservation in the Amazon. *Earth Syst Sci Data* 651–661 https://knb.ecoinformatics.org/view/doi%3A10.5063%2FF1BG2KX8#snapp_computing.6.1 (2016).
6. REDPARQUES. Informe regional implementación del programa de trabajo sobre áreas protegidas 2011 - 2015: Región bioma amazónico. 115 (2016).
7. REDPARQUES. Avances en la implementación del Programa de Trabajo sobre Áreas Protegidas 2016-2017: Región Bioma Amazónico. Región Bioma Amazónico. Proyecto IAPA – Visión Amazónica. REDPARQUES, WWF, FAO, UICN, ONU Medio Ambiente. 1–36 (2018).
8. Navarrete, S. *Protocolo y guía metodológica para medición de efectividad del manejo del bioma amazónico*. *Proyecto IAPA – Visión Amazónica. Unión Europea, Redparques, WWF, FAO, UICN, ONU Medio Ambiente* (2018).
9. Maxwell, S. L. *et al.* Area-based conservation in the twenty-first century. *Nature* **586**, 217–227 (2020).
10. Prüssmann, J., Suárez, C. & Chaves, M. *Atlas of Conservation opportunities in the Amazon biome under Climate Change Considerations*. (2017).
11. ILO. *C169 - Indigenous and Tribal Peoples Convention (No. 169)*. (1989).
12. ACIMA - Asociación de Capitanes Indígenas del Miritί Amazonas. *Sistema de Ordenamiento Ambiental*. (2018).
13. Fundación Gaia Amazonas. *Sistematización de experiencias de investigación endógena llevada a cabo entre los años 2002-2018, en los Territorios Indígenas del Pirá Paraná y el Tiquié, Vaupés, Colombia*. (2020).
14. MAPBIOMAS. Mapbiomas Amazonia Site. (2020).
15. Oliveira, P. J. C. *et al.* Land-Use Allocation Protects the Peruvian Amazon. *Science* **317**, 1233–1236 (2007).
16. Schwartzman, S. *et al.* The natural and social history of the indigenous lands and protected areas corridor of the Xingu River basin. *Philos. Trans. R. Soc. B Biol. Sci.* **368**, 20120164 (2013).
17. Stevens, C., Winterbottom, R., Springer, J. & Reytar, K. *Securing Rights, Combating Climate Change*. (2014).
18. Jusys, T. Changing patterns in deforestation avoidance by different protection types in the Brazilian Amazon. *PLoS One* **13**, e0195900 (2018).
19. Soares-Filho, B. *et al.* Role of Brazilian Amazon protected areas in climate change mitigation. *Proc. Natl. Acad. Sci.* **107**, 10821–10826 (2010).
20. Nepstad, D. *et al.* Inhibition of Amazon Deforestation and Fire by Parks and Indigenous Lands. *Conserv. Biol.* **20**, 65–73 (2006).
21. Walker, W. S. *et al.* The role of forest conversion, degradation, and disturbance in the carbon dynamics of Amazon indigenous territories and protected areas. *Proc. Natl. Acad. Sci.* **117**, 3015–3025 (2020).
22. Blackman, A., Corral, L., Lima, E. S. & Asner, G. P. Titling indigenous communities protects forests in the Peruvian Amazon. *Proc. Natl. Acad. Sci.* **114**, 4123–4128 (2017).
23. Baragwanath, K. & Bayi, E. Collective property rights reduce deforestation in the Brazilian Amazon. *Proc. Natl. Acad. Sci.* **117**, 20495–20502 (2020).
24. Tollefson, J. Forest ecology: Splinters of the Amazon. *Nat. News* **496**, 286 (2013).
25. Saura, S., Bastin, L., Battistella, L., Mandrici, A. & Dubois, G. Protected areas in the world's ecoregions: How well connected are they? *Ecol. Indic.* **76**, 144–158 (2017).
26. Castillo, L. S. *et al.* Connectivity of Protected Areas: Effect of Human Pressure and Subnational Contributions in the Ecoregions of Tropical Andean Countries. *Land* **9**, 239 (2020).
27. Hilty, J. *et al.* Guidelines for conserving connectivity through ecological networks and corridors. *IUCN, Int. Union Conserv.*

Nat. (2020).
28. Mascia, M. B. & Pailler, S. Protected area downgrading, downsizing, and degazettement (PADDD) and its conservation implications. *Conserv. Lett.* **4**, (2011).