



## Cornered by PAs: Adopting rights-based approaches to enable cost-effective conservation and climate action



Vicky Tauli-Corpuz<sup>a</sup>, Janis Alcorn<sup>b</sup>, Augusta Molnar<sup>c,\*</sup>, Christina Healy<sup>d</sup>, Edmund Barrow<sup>e</sup>

<sup>a</sup> UN Special Rapporteur for the Rights of Indigenous Peoples, Philippines

<sup>b</sup> University of Manitoba, Canada

<sup>c</sup> The Mountain Institute, United States

<sup>d</sup> Tenure and Enterprise Associate, Rights and Resources Initiative, United States

<sup>e</sup> Rights and Resources Initiative, United States

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### ABSTRACT

We analyze how governments and the international community expand protected areas (PAs) to reduce biodiversity loss and ecosystem degradation at a cost to indigenous peoples and local communities (IPLCs) in terms of rights and conflict. This contradicts commitments made by the conservation community to UNDRIP and Indigenous Peoples' (IPs) and other human rights and Aichi Biodiversity Target 11. We build on information indigenous and conservation organization leaders shared with the UN Special Rapporteur for the Rights of Indigenous Peoples at the 2016 UN Permanent Forum for Indigenous Issues of complaints against governments for violation of IPs' rights, and link these to extensive, like evidence in the literature. Case studies from countries of priority biodiversity (Panama, Peru, India, Republic of Congo and Indonesia) broaden the evidence. Globally IPs and local communities conserve nearly 2 billion hectares of land for diverse reasons (sacred, critical resource areas, water). Much of their contributory effort goes unrecognized and disrespected, even though IPLCs invest significant time and money in forest and land conservation—concentrated in low and middle-income countries of priority biodiversity with spending gaps. While more of these countries endorse IPLC conservation, the rights still remain limited in many countries. Across much of the world, IPLCs have become 'cornered' by PA boundaries that overlap their lands while PA policies and neighboring commercial concessions further separate them from land and livelihoods and justify killings and evictions, and livelihood and identity loss. Though IUCN PA governance types embrace IPLC management, the reality is a preponderance of State-owned-and-managed PAs. This does not help meet conservation targets. Globally endorsed principles for grievance and reconciliation exist but have not been applied; meanwhile IPLCs invest heavily in conservation with limited support from governments and donors who play a predominant role in setting global biodiversity targets.

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### 1. Introduction

Governments and the international community seek ways to halt biodiversity loss and ecosystem degradation and achieve global climate and development priorities. Expanding the global network of Protected Areas (PAs) is a key approach to achieve the goals of the Convention on Biological Diversity (CBD), the 2030 Agenda for Sustainable Development, and the Paris Agreement on Climate Change.

In the context of increasing human pressure in and around PAs, this paper argues that far from improving the lives of local people, PAs investments directly affect the land and forest rights of communities, creating “fortress” conservation zones that diminish, rather than enhance, local livelihoods and biodiversity. This creates abuse and human-rights violations. Recognizing that many PAs authorities are underfunded and limited in their capacity to deliver climate or biodiversity outcomes, the push for more and larger PAs areas exacerbates existing funding gaps and the potential for injustice.

Despite high levels of poverty and insecure resource rights, Indigenous Peoples and Local Communities (IPLCs) are documented as investing financially and in-kind on conservation with potential outcomes equivalent to those of State-owned-and-

\* Corresponding author.

E-mail addresses: [unsr@vtaulicorpuz.org](mailto:unsr@vtaulicorpuz.org) (V. Tauli-Corpuz), [janisalcorn@yahoo.com](mailto:janisalcorn@yahoo.com) (J. Alcorn), [amolnar@rightsandresources.org](mailto:amolnar@rightsandresources.org) (A. Molnar), [chealy@rightsandresources.org](mailto:chealy@rightsandresources.org) (C. Healy), [edmund@barrow.co.ke](mailto:edmund@barrow.co.ke) (E. Barrow).

managed PAs, while conserving vast areas of land across the globe. Building on these efforts provides a path to replace fortress-conservation models with rights-based approaches that improve conservation outcomes while ending many human rights abuses committed in the name of conservation.

The purpose of the paper is: a) to evaluate progress towards the indigenous peoples' and human rights principles as ratified by the conservation community; b) bring attention to the continued cornering of IPLCs by state owned and managed PAs despite commitments and c) document the significant financial and management contribution of IPLCs to biodiversity conservation, which draws into question the potential of the prevailing, 'cornering' conservation model. We seek to demonstrate that the conservation and PA movement have neither adequately embraced the promised rights-based commitments nor accepted the reality that the planet has much greater chances of maintaining biodiversity by supporting efforts of IPLCs rather than prioritizing state-owned-and-managed PAs.

The PA movement has embraced various forms of community conserved areas, reconfigured some existing PAs to correct rights violations, and demonstrated progress towards addressing issues of human rights and of indigenous and local people in conservation. While Indigenous Peoples' and local communities' conserved territories and areas (ICCAs) are recognized as one governance type for all IUCN PA management categories<sup>1</sup>, IPLC representatives question that the broader conservation community has yet to come to terms with the different world views and knowledge systems of traditional peoples, including their approach to nature conservation (McCarthy et al., 2018; United Nations, 2016). As a result, CBD recognized ICCAs remain marginal to state-sanctioned protected areas and other ecosystem conservation measures (OECMs). ICCAs lack legal standing in most jurisdictions, are defined by voluntary actions and remain largely undocumented. IPLC contributions to the protection of sacred groves and other traditionally used lands and territories have yet to be fully acknowledged by the broader conservation community, yet alone national or sub-national governments (Forest Peoples' Programme, 2018a). By 2016, there were few PAs governed by IPLCs listed in the World Protected Areas Database.

While we argue much still needs to be done, there is great potential to better pursue rights-based approaches. This analysis supports a "win more: lose less" scenario for conservation, people, and human rights. The evidence we present demonstrates how important it is to move from aspirations to the realization of rights for Indigenous and local peoples as a key implementation priority for conservation and protected areas. And assign significantly more conservation funding to IPLC initiatives.

## 2. Communities are effective conservation agents

There is a broad and consistent overlap between global biodiversity hotspots and IPLC managed lands and territories which is recognized in the the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) (Garnett et al., 2018). The total land area with legal recognition managed by IPLCs is nearly equal to that contained in state-owned and managed PAs ((Molnar, Scherr, & Khare, 2004; RRI, 2015). And the total land area

managed by IPs alone are almost double the area under PAs (38 million km<sup>2</sup> compared to 20 million km<sup>2</sup> (Rights and Resources Initiative, 2015; Garnett et al., 2018; UNEP-WCMC (2018), p. 6). In addition to their considerable financial and non-financial contributions to the sustainable use and protection of globally significant ecosystems, community conservation holds distinct advantages—over and above traditional PAs—for global biodiversity conservation and social equity (Barrow and Murphree, 2001; Hulme and Murphree, 2001), including: a) savings in government or private institution-building and maintenance over time (Margoluis & Salafsky, 1998; Wycoff-Baird, 2001); b) savings in compensation to communities (Clay, Alcorn, & Butler, 2000; Sayer et al., 2004); c) savings in conflict management related to existing rightsholders (Brown, 1998; Biodiversity Support Programme, 2001); d) savings in some regulatory enforcement costs (Barrow, Gichohi, & Infield, 2000; Borrini-Feyerabend et al., 2004; Oviedo, 2002); and e) greater local employment, improved local livelihoods from conservation benefits, reduced welfare and other expenditures, e.g. from government or donor conservation projects (Healy, 2001; Salafsky et al., 2001; Burch and Singh, 2003).

Molnar et al. (2004) argued for spending more on community conservation complementing community efforts and enhancing the enabling environment for conservation in the face of existing and new pressures such as climate change, conversion, degradation, and loss of connectivity.

Over the past 14 years, recognition of conservation by IPLCs has grown due to increased recognition of their rights and tenure over collective lands and forests, and study of these lands' biodiversity. Reviews of tenure in 64 countries, covering 84% of the global terrestrial area, shows significant progress in recognizing collective land rights (RRI, 2015, 2018). By 2015, nearly 2 billion hectares of land were designated for or owned by IPLCs. There are nearly 1 billion hectares in China, 500 million in Canada, and 500 million hectares in the other 62 countries. Communities and IPs are estimated to hold as much as 65% of the world's land area under customary collective tenure (Bassi, 2017). Yet, many governments formally recognize a small fraction of IPLC rights. For example, globally sacred groves could number a quarter to half a million, yet most are unrecognized or respected, except locally (Barrow, 2019).

Evidence shows that IPLCs generally have strong ties to lands and forests they depend on, and many have developed locally adapted institutions that are positively associated with high biodiversity in lands and fresh-water systems managed by them (Nelson & Chomitz, 2011; Pretty et al., 2009; Stevens Ed., 2014). Using forests as a surrogate for biodiversity, analyses show that community-owned forests and local rulemaking are linked to lower carbon emissions (Chhatre & Agrawal, 2009; Collins & Mitchard, 2017). A study from Asia and Latin America demonstrated wildfires are fewer in multiple-use PAs under IPLC management than in strict PAs (Nelson & Chomitz, 2011). In Brazil, indigenous lands are as effective as PAs to reduce deforestation (Nepstad et al., 2006; Nolte, Arawgwal, Silvius, & Soares-Filho, 2013; Stevens, 2014). In Panama, deforestation rates are lower in indigenous territories (1.38% per annum) than in public PAs (1.42%), even though deforestation is higher outside titled indigenous lands (6.6%) than outside PAs (4.2%, Halverson, 2018).

The World Bank's Independent Evaluation Group concluded that community-managed forests are more effective in reducing deforestation than strict PAs and, "[i]n Latin America, indigenous areas are almost twice as effective as any other form of protection" (Nelson & Chomitz, 2011, Table 6). There are similar conclusions from an African review (Barrow, Kamugisha, Nhantumbo, Oyono, & Savadogo, 2016) which concluded that the greater security of local forest tenure, the stronger the interest and will of communities.

<sup>1</sup> Indigenous and Community Conserved Areas are defined by IUCN as "natural and modified ecosystems, including significant biodiversity, ecological services and cultural values, voluntarily conserved by indigenous peoples and local communities through customary laws or other effective means" (IUCN World Conservation Congress 2004 Resolutions 3.039 Community Conserved Areas).

### 3. New commitments by governments and policymakers

In addition to the increased recognition of collective and community land rights, formal commitments by the conservation community has increased to recognize and respect Indigenous Peoples (IPs) rights and those of local communities. Since 2004, there have been new commitments by governments, together with supportive international law, policies and standards which have been adopted by international conservation organizations.

For example, Canada, Australia, and New Zealand introduced major changes to their conservation model and related legislation ([corneredbyPAs.com/world](http://corneredbyPAs.com/world); [Canadian House of Commons, 2017](#)). Peru adopted legislation regarding uncontacted Indigenous Peoples (IACHR, 2014; UN OHCHR, 2018). India passed the 2006 Forest Rights Act<sup>2</sup>, and an Indonesian Constitutional Court decision in May 2013 invalidated Forestry Law 41 which claimed government ownership of customary 'adat' forests. Australia codified a new protected area type, Indigenous PAs (IPAs), a subset of IUCN recognized ICCAs, and now more than 75 IPAs cover 45% of Australia's national PA system ([Lee and Tran, 2016](#); [Gilligan, 2006](#); [Langton, Rhea, & Palmer, 2005](#)).

Since the 2003 World Parks Congress (WPC) and the rights recognition targets of the 2003 "Durban Action Plan", IUCN modified their PA management categories. The 2004 IUCN World Conservation Congress acknowledged IPs could establish recognized reserves as a separate governance category (ICCAs) within the existing 6 management categories, which had been adopted in 1994 ([Lopoukhine et al., 2012](#); [Stevens Ed., 2014](#)). In 2004, the seventh meeting of the Conference of the Parties (COP) to the CBD adopted a program of work on PAs (POWPA) mandating the effective participation of and full respect for the rights of IPs in establishing, managing and monitoring PAs ([Makagon, 2014](#)). In response to growing public pressure about human rights and PA issues ([Chapin, 2004](#)), the International Institute for Environment and Development (IIED) and the Wildlife Conservation Society (WCS) brought together larger conservation NGOs for a Conservation Initiative on Human Rights (CIHR), which published a 2014 white paper assessing progress since 2009 ([CIHR, 2014](#); [Jonas et al., 2016](#)). These events set the scene for recognizing and respecting a vast area over which Indigenous Peoples have legitimate tenure and/or rights 2016.

The UN Declaration on the Rights of Indigenous Peoples (UNDRIP), adopted in 2007, is based on existing international law and contains a section on lands and resources ([MacKay, 2017](#); [Forest Peoples Programme, 2017](#)). The Organization of American States (OAS) adopted the American Declaration on the Rights of Indigenous Peoples in 2016 which provided additional protection for those in voluntary isolation and those affected by internal armed conflicts. Both the Inter-American Court on Human Rights (IACHR) and the African Commission on Human and Peoples' Rights (ACHPR) are active in human rights jurisprudence and case-derived guidance.

Between 2010 and 2017, there were, as examples, four decisions related to conservation, which address PA establishment, and the management and the restitution of lands incorporated into PAs. These are *Xákmok Kásek vs Paraguay* (2010), *Endorois Welfare Council in Kenya* (2010) ([MacKay, 2017](#)), *Kaliña and Lokono Peoples vs Suriname* (2015) ([United Nations, 2016](#); [Tauli-Corpus, 2015](#); [UN OHCHR, 2018](#)). The Suriname decision by the IACHR imposed the same standards on similar PAs as those required for any use of natural resources in indigenous territories ([MacKay, 2002](#), [MacKay, 2017](#); <http://www.corneredbyPAs.com/world>).

In addition, the procedural right of **Free, Prior and Informed Consent** (FPIC) is an accepted practice for communities potentially

affected by state-sanctioned activities. The World Bank is adopting full FPIC in its performance standards, and the GEF Council is assessing whether FPIC should apply to all GEF parties.

In 2014, the COP to the CBD highlighted the requirement that PAs and their management regimes must be consensual, participatory and respect IPs' rights. It recognized the contributions of IPs within their territories for the effective conservation of priority biodiversity sites. Most CIHR members now have IPs' policies, including grievance mechanisms. Bilateral donors are adopting more progressive policies ([corneredbyPAs.com/world](http://corneredbyPAs.com/world), for example, Spain and Norway). In Bolivia, Danish cooperation supported indigenous land titling and the inclusion of IPs in the latest version of their constitution ([Danish Embassy to Bolivia, 2009](#)).

A major gap remains between commitments to track progress towards rights standards, including the lack of action around the internal monitoring system proposed by CIHR and related commitments for grievance and restitution mechanisms binding on nation states. It has been proposed that IUCN or the Global Environment Facility (GEF), the Office of the UN High Commissioner for Human Rights, the UN Special Rapporteur on the Rights of Indigenous Peoples, and regional IUCN commissions, and regional indigenous federations could create such a system ([Springer, 2015](#)). National models exist, such as Canada's 'truth and reconciliation initiative' and other ones from South Africa and Australia ([Baldwin & Beazley, 2019](#); [Moses, 2011](#); [Short, 2006](#); [Truth and Reconciliation Committee, 2015](#); [Wilson, 2015](#)).

Yet, despite enabling international law and policy, international commitments and some by specific nations, a gap remains in respect for and recognition of the rights of IPLCs in state-owned-and-managed PAs or community conserved areas in most countries. Were such rights acknowledged, the area under recognized conservation would dramatically increase and the effectiveness of conservation would arguably increase over the long term in many state-owned-and-managed PAs as well as community conserved areas ([Forest Peoples Programme, 2019](#)). Countries could invest finances more prudently.

### 4. IPLCs invest extensively in conservation already

This paper updates previous analysis by Forest Trends and Rights and Resources Initiative (RRI) ([Molnar et al., 2004](#)). Evidence presented herein draws on several sources of complementary data and analysis, including: a) an extensive literature review of progress in respecting IPLC rights in conservation and the financing of public PA systems and community conserved areas over the past ten years since UNDRIP was adopted; b) the findings from in-depth case studies from five high biodiversity countries (Peru, Panama, Indonesia, Republic of Congo, and India) where IPs are impacted by PAs ([Baldovino & Calmet, 2018](#); [Counsell, 2018](#); [Gindroz, 2018](#); [Halverson, 2018](#); [Rai & Madegowda, 2018](#))<sup>3</sup>; c) a recent review of the state of international jurisprudence relating to conser-

<sup>3</sup> [Stevens \(2014\)](#) writes that "Colchester (1999: 12) estimated that "as many as three quarters of all PAs overlap indigenous territories," and in 2003 the Indigenous Peoples Ad Hoc Working Group for the World Parks Congress (2003b: 1) observed that "a majority of these PAs overlap lands owned or claimed by indigenous peoples" and raised the concern that "most of these have been established without indigenous peoples' consent." [Sobrevila \(2008: 7\)](#) similarly reported that "it has been estimated that as much as 85 percent of the world's PAs are inhabited by Indigenous Peoples." However, in recent years, a large number of European PAs have been added to the WDPA, and this decreased the total global percentage of PAs that overlap with Indigenous peoples' territories "([Stevens, 2014](#); page 34 note 32)." Updating the 2011 figures that Stevens reported in 2014 to 2017, there were 236,200 PAs globally with the terrestrial PAs covering 263,932 km<sup>2</sup>. Of these, a total of 105,670 PAs, 45% of all PAs globally, were found across 39 countries in Europe (<https://www.protected-planet.net/c/increased-growth-of-protected-areas-in-2017> and <https://www.eea.europa.eu/data-and-maps/indicators/nationally-designated-protected-areas-10/assessment>).

<sup>2</sup> [United Nations 2016](#), page 23.

vation and Indigenous Peoples (MacKay 2017); d) a report to the United Nations (UN) by the UN Special Rapporteur for Indigenous Peoples (United Nations, 2016); and e) interviews and comments from over 27 experts in conservation and human rights issues. We draw on RRI's tenure tracking data and RRI companion analysis of the contribution of collective lands to carbon sequestration and avoided deforestation (RRI, 2015, 2018). The detailed findings are summarized in a longer report with background studies (<http://www.corneredbyPAs.com>).

The financial analysis was carried out by compiling best estimates of funding and expenditures for public PAs based on literature reviews and positioning these figures with an analysis of how much communities spend (labor and cash) managing their collective lands (including forests) in high biodiversity areas. We used data from various community-level studies to derive a global estimate, calculating the average management investment per hectare for each collective land type in the RRI tenure tracking datasets. This estimate was compared to the per hectare funding and investment in low-and-middle income country PAs, based on various literature sources. Details of the methodology for the financial analysis are described (<http://corneredbyPAs.com/brief>).

## 5. Official investments in PAs

Questions of effectiveness have haunted proponents of PAs. Of the 29% of all PAs that were assessed globally, only 24% had sound management (Deguignet et al., 2017; Juffe-Bignoli et al., 2014; Leverington, Costa, Pavese, Lisle, & Hockings, 2010). Yet, a major challenge for the expansion and effective management of existing public PAs is the financing gap. Analysis in 2004 and 2018 show IPLCs are major funders of conservation, usually in terms of level of effort and some cash, while state PAs systems face serious, persistent funding gaps (Emerton, Bishop, & Thomas, 2006; Molnar et al., 2004; Waldron et al., 2013). Given this funding reality, the persistence of exclusionary conservation models can no longer be justified as the only means for conservation effectiveness, nor can governments afford to invest in more state-owned conservation estate. Community conserved areas can complement government efforts and achieve the Aichi Targets and the SDGs.

Official funding for PA systems is consistently inadequate, especially in low and middle-income countries, despite targets such as IUCN's 2010 goal of USD 300 billion per acre (IUCN, 2010). The official sources of funding are, in descending order, governments, multilateral organizations (e.g. the World Bank and GEF), bilateral aid agencies, NGOs, foundations, and private entities. According to some estimates, national governments account for over 70% of total spending on PAs (Jepson, Caldecott, Milligan, & Chen, 2015; Lockwood & Quintela, 2006; Parker et al., 2011).

About 98% of government domestic, biodiversity-related spending is in upper-middle and high-income countries. While less than 7% of government funding for domestic and international conservation is spent in developing countries, despite their often high biodiversity values (Waldron et al., 2013).

Table 1 shows the estimated expenditures on PAs and conservation activities in some low and middle-income countries (RRI, 2018; <http://www.corneredbyPAs.com/brief>). Given the low quality of available data, these figures are probably underestimates. Moreover, a small proportion of 'priority' PAs receives the bulk of the conservation funding invested in developing countries. IPLCs invest significant amounts and effort in the high biodiversity areas they own or that are designated for them.

Expenditures on PAs by country varies among developing and low middle-income countries. For example, estimated total expenditure on PAs per hectare per year (not including community contributions) is about US\$0.62 in Brazil, US\$3.78 in Peru, US\$4.00 in

India, US\$9.21 in Indonesia, and US\$10.78 in Kenya. (Waldron et al., 2013; Parker et al., 2011; Nakamura & Sofia, 2017).

Even though the territories and lands of IPLCs are often of high conservation value, they receive a small percentage of official conservation funding. A 2014 review of conservation spending in the Amazon by foundations, multilateral and bilateral institutions, and international conservation NGOs found US\$1.34 billion was spent between 2007 and 2013, with 14% on indigenous land management or local livelihoods (Campos & Martin, 2014). A 2017 review found that 43 donors invested approximately US\$1.07 billion in the Amazon in 2013–2015, of which 11.1% was invested in indigenous land management, and 6.3% was spent on local livelihood initiatives (Strelneck & Vilela, 2017). An analysis of about US \$200 million in conservation investments in the Amazon found that 46% went to PAs, while only 9% went to indigenous territories, even though the latter was more than 2.5 times the area of the former (Sobrevilla, 2008).

Since 2004, there are new climate change sources of funding for mitigation and adaptation, particularly REDD + . While potentially important, to-date pledges are much higher than disbursements. Most funding for REDD + is spent on readiness, with no guarantee of long-term funding for any increase in PAs (Wolosin et al., 2016). Total pledges for and investments in REDD + from both the public and private sectors amounted to US\$8.7–9.8 billion in the period 2006–2014 (Angelsen, 2017; Lee & Pistorius, 2015; Fletcher, Dressler, Büscher, & Anderson, 2016; Nhantumbo, 2015; Norman & Nakhoda, 2015). Much less has been disbursed, and, in the case of PAs, may simply be a substitute for traditional sources of funding.

## 6. Investments by IPLCs

Table 2 updates the 2004 estimates for investments by IPLCs in low- and middle-income countries in conserving territories and lands under their control or ownership (Molnar et al., 2004). As in 2004, the new estimates are based on case studies of labor and cash invested by communities from their resources in conservation such as forest management, fire protection and management, restoration and rehabilitation, patrolling and policing, and mapping and cataloguing biodiversity. The area under community forest tenure has increased since 2004. A 2014 estimate indicates that nearly 500 million hectares of forestlands in low- and middle-income countries are designated for or are owned by IPLCs (RRI, 2014; Springer, 2015). Following RRI tenure tracking categories, estimates are compared for forest land holding and land holdings in general and for those recognized by governments as owned by IPLCs or those designated by governments to IPLCs.

Globally, IPLCs invest an estimated 15–23% (about US\$3.16 billion to 4.57 billion) of the amount spent on conservation by governments, donors, foundations, and NGOs, combined. Much of this value is invested by IPLCs in developing countries, whereas the majority of public spending is in developed countries. Perhaps communities are more efficient in conservation than the conventional fortress model because they spend less per hectare yet are likely to achieve at least equivalent conservation outcomes (Gray et al., 2015; [www.corneredbyPAs.com](http://www.corneredbyPAs.com)). It is clear financing for PAs is clearly inadequate, public spending support for IPLC rightsholders is nearly absent.

## 7. How indigenous peoples lose out

For all the potential of rights-based conservation and documented efforts of IPLC conservation initiatives, change on the ground continues to be slow (Baldwin & Beazley, 2019; United Nations, 2016; Witter & Satterfield, 2018). The 2016 investigative

**Table 1**

Estimated annual investment in conservation by 'official sources' in six low- and middle-income countries.

Country	Annual conservation investment (US\$)	Total protected land area (ha)	Annual conservation investment per unit area (US\$/ha)
Brazil	153,272,973	246,849,300	0.62
India	73,876,818	18,264,700	4.04
Indonesia	208,450,000	22,625,000	9.21
Kenya	78,167,801	7,254,400	10.78
Peru	104,318,571	27,619,200	3.78
Tanzania	102,023,918	36,133,500	2.82

Note: "Official sources" comprise investments in conservation and biodiversity by governments and private foundations, and includes official development assistance. Sources: Annex <http://www.corneredbyPAs.com/brief>; RRI, 2018

**Table 2**

Estimated annual investment in conservation by IPLCs in low - and middle - income countries, by land - tenure category.

Land - tenure category	Area (million ha)	Total annual investment (US\$ billion), Based on median unit investment value
Forest land owned by IPLCs	381.43	1.36
Forest land designated for and owned by IPLCs	478.05	1.71
Total land area owned by IPLCs	886.09	3.16
Total land area designated for and owned by IPLCs	1,279.6 0	4.57

Note: The median unit investment value is estimated at US\$3.57 per hectare per year based on findings from 29 case studies in 14 low-and middle-income countries.

Source: Annex <http://www.corneredbyPAs.com/brief>; RRI, 2018

report of the UN Special Rapporteur on Indigenous Peoples (United Nations, 2016) concluded<sup>4</sup>:

*"While the high rate of biodiversity in indigenous ancestral lands is well established, the contribution of indigenous peoples to conservation has yet to be fully acknowledged. Although a new rights-based paradigm to conservation has been advancing during the last decades, it remains in its initial stages of being applied. Rights-based conservation measures continue to be hampered by the legacy of past violations and by the lack of legal recognition by States of indigenous peoples' rights. Protected Areas continue to expand, yet threats against them from extractive industry, energy and infrastructure projects are also increasing, and thus the urgency to address effective, collaborative and long-term conservation is of paramount importance. The escalating incidence of killings of indigenous environmentalists highlights the importance of conservationists and indigenous peoples joining forces. Insecure collective land tenure continues to undermine the ability of indigenous peoples to effectively protect their traditional lands, territories and natural resources."*

The UN's Special Rapporteurs on the Rights of Indigenous Peoples have, since the office's establishment in 2001, received numerous allegations of large-scale violations of the rights of IPs in the context of conservation. Some of the consequences IPs faced following forced displacement from PAs are marginalization, poverty, loss of livelihoods, food insecurity, extrajudicial killings, disrupted links with spiritual sites, and the denial of access to justice. Successive Special Rapporteurs raised serious concerns over the impact PAs have had in a wide range of countries including Argentina, Botswana, Chile, Ecuador, Ethiopia, Honduras, Kenya, Mexico,

Namibia, Nepal, the Russian Federation, South Africa and the USA. These include violations related to biodiversity conservation in over 28 countries.

## 8. Indigenous peoples are increasingly cornered by protected areas.

IPs are increasingly finding themselves cornered by PAs. Being 'cornered' goes beyond just having PAs cut your boundaries, cut you out of boundaries, or prevent your movements. You are cornered not only when the creation and establishment of PAs hem your remaining lands and territories in so you cannot access the resources needed for your refuge and sustenance. You are cornered when the State pits you against commercial interests with concessions without protecting your rights of access and use. You are cornered if PA authorities remake your customary governance systems and resource management rules and systems with an external plan (Yin, 2017). You are cornered if PAs deny you access causing loss of livelihoods and identity. You are cornered if PAs allow the loss of your security against killings and evictions in the name of conservation. This section discusses: a) overlapping lands, b) killings and evictions, c) loss of livelihoods and cultural identity, d) sanctioning of indigenous practices, e) conflicts, f) threats to traditional societies, g) tourism impacts, and h) lack of or failure of corrective grievance and restitution mechanisms.

### 8.1. Overlaps of lands

Globally, the overlap between PAs and the IP lands is over 50%, even as new lands are expropriated from IPs for PAs. (Brosius, 2004; Colchester, 1999; Deguignet et al., 2017; Garnett et al., 2018; Sobrevila, 2008; Stevens, Pathak Broome, & Jaeger, 2016; UNEP, 2003)<sup>5</sup>. Accurate analysis of the overlaps is difficult, because government maps are rarely ground-truthed and/or prepared at a scale that is likely to be error free. Garnett et al. looked at 87 countries and found IPs have rights to or manage over 37.9 million km<sup>2</sup> of land. This constitutes 40% of the total global terrestrial area in PAs. This does not include all terrestrial rights claimed by IPs or areas managed by local communities (Garnett et al., 2018), nor does it include most of the sacred groves found across the globe (Barrow, 2010).

Linguistic distribution provides evidence of the spatial distribution of IPs. The World-Wide Fund for Nature (WWF)<sup>6</sup> found a 95% global overlap between IPs and high-biodiversity ecoregions, based on linguistic analyses (Stevens Ed., 2014). A 2017 linguistic study found a 78% overlap between the geographic location of all 238 natural and mixed natural-cultural World Heritage sites and at least one indigenous language (Romaine & Gorenflo, 2017).

Over 80% of 158 Central and South American PAs examined in 1985 were inhabited (Amend & Amend, 1995). Twenty-seven percent of 801 South American PAs studied in 2010 overlapped IP territories (Cisneros & McBreen, 2010), while 39% of 948 Central American PAs studied overlapped IP territories. A map (Fig. 1) of the Amazon (*Red Amazónica de Información Socioambiental Georreferenciada—RAISG, 2017*) documents that titled IP territories cover 27.7% while PAs cover 23% of the Amazon. But, due to overlaps of

<sup>5</sup> Aichi Biodiversity Target 11 is for terrestrial, coastal and marine PAs and "other effectively conserved area-based conservation measures"(OECMs). However, many countries may not adopt laws and administrative regulations to appropriately recognize OECMs in time to apply them as a way of meeting Target 11; in such cases, countries will need to rely solely on PAs (either by 2020 or at some later date).

<sup>6</sup> Shooting people who are suspected poachers "on sight" does not allow normal due process—it is execution without trial. The Rights and Resources Initiative has seen many reports of people who have been killed as if they were poachers of state property when they were simply hunting for food, collecting herbs or firewood, or walking across state land to visit neighbors.

<sup>4</sup> The acronym WWF stands for the World Wildlife Fund in the United States of America and the World Wide Fund for Nature elsewhere.

these two designations, PAs and titled IP territories cover 45.4% (RAISG, 2017).

Given these spatial overlaps, and despite appeals by IPs for collaboration, the relationship between PAs and IPs in many countries is still characterized by conflict (United Nations, 2016).

A 2016 study by the Rainforest Foundation UK of 34 PAs in five countries of the Congo Basin (Cameroon, Central African Republic, the Democratic Republic of the Congo, Gabon and the Republic of the Congo) found IPs have virtually no tenure security over their traditional lands (Pyhälä, Orozco, & Counsell, 2016; Counsell, 2018). The creation of 26 of the areas as National Parks resulted in the partial or complete relocation or displacement of local indigenous and farming communities who lived in the area prior to park establishment, with no evidence of compensation (Counsell, 2018). Aichi Biodiversity Target 11<sup>7</sup> calls for conserving at least 17% of terrestrial and inland waters and 10% of coastal and marine areas by 2020 as recognized PAs. The Parties of the CBD are not advancing Aichi Target 11 consistent with their commitments to 'equitable and effective' PAs and other effective area-based conservation measures (Baldwin & Beazley, 2019). There is now growing consensus that the post-2020 Biodiversity Conservation Framework will need to be rights-based, and sensitive to the role and contributions of IPLCs in reaching the 30% target for PAs and other effective area-based conservation measures (OECM) (CBD, 2019).

If not more problematic, implementation does not address overlapping State rights, for example, to allocate mining, oil and gas concessions. A review of energy and mining companies listed on the Russell 1000 Index found over 30% of the global production of oil and gas was sourced either on or near IPs' lands. This accounts for 40% of current production (First Peoples Worldwide, 2013). In terms of future extraction, IPs' lands are expected to account for 50% of oil and gas production and almost 80% for mining (The Munden Project, 2017). Of the 34 PAs studied by the Rainforest Foundation UK in the Congo, 25 bordered logging concessions, 19 overlapped with mining concessions and 9 overlapped with oil concessions (Pyhälä et al., 2016).

Rights violations result from the failure to implement commitments to human rights, including those related to IPs (United Nations, 2016). Indigenous and local people's lands deserve to be respected and not alienated to create more state-owned-and-managed PA's or expropriated for extractive industry (<http://corneredbyPAs.com/India>).<sup>8</sup>

## 8.2. Killings and evictions

Extrajudicial killings has been justified by some as necessary for conservation (McCann, 2017). According to a 2017 report by the British Broadcasting Corporation, authorities in India's Kaziranga National Park, for example, were responsible for 106 extrajudicial killings in the previous 20 years, with victims including elderly people and children (UN Secretary General, 2016). Shoot-to-kill policies for illegal hunters in Botswana and Uganda contradict the principles of both the CIHR and UNDRIP's Article 7. The militarization of conservation has been documented in the Central Afri-

can Republic, the Democratic Republic of the Congo, Guatemala, India and South Africa (Annecke and Masubele, 2016; Marijnen & Verweijen, 2016; Massé & Lunstrum, 2016; Barbora, 2017; Ybarra, 2016). Park guards and rangers receive a military type training and funding has increased for arming guards. German donors invested in a conservation practice that "there is no substitute for a well-equipped, well-trained, and highly motivated ranger" (Henson, Malpas, & Údine, 2016). The trend towards militarization also occurs in PAs where governments outsourced management to private or non-governmental groups (Buscher & Ramutsindela, 2016). NGOs are sometimes formed to carry out armed patrols in PAs. For example, National Park Rescue, ([www.nationalparkrescue.org](http://www.nationalparkrescue.org)) "only funds direct action operations to secure national parks and safeguard wildlife." Support from conservationists helps legitimize such approaches, despite its risks to IPs (Buscher et al., 2018). This would seem to part of a global trend of meeting rising conflict over green resources, often targeting IPs, and related violence with increased state militarization (Parker, 2017; Ybarra, 2017).<sup>9</sup>

Evictions from claimed lands, the burning of homes and destroying of productive assets are other violent ways used against IPs to establish or expand PAs. Such evictions are usually not formally monitored, but researchers, advocates and the press report them sporadically. A 2006 review found 184 reports of evictions during the establishment of PAs—largely in Africa, Asia and North America (Brockington and Igoe, 2006). Estimates of the number of families affected range in millions of people (Dowie, 2009). A recent analysis found over 250,000 people from 15 countries were evicted due to PAs between 1990 and 2014, with up to 1 billion people affected by conflicts in forest reserves (Kashwan, 2017). There is no rationale for killings and violence in the PA movement. There are other, more just and effective options.

## 8.3. Loss of livelihoods and cultural Identity

Establishing PAs can deny IPs access to their assets—the knowledge, lands, and forests on which they depend for livelihoods, health, and identities (Seymour, 2008). This economic, political, and cultural marginalization is characteristic of the old PA paradigm (Stevens Ed., 2014) which causes social separation that can destroy indigenous societies (Witter & Satterfield, 2014). For example, if the IPLCs now using PA resources "illegally" were to be prevented from such use, millions would become conservation refugees. The economic impacts of such restrictions on access are hard to assess. Cameroon-based research described "skyrocketing" costs associated with Korup National Park's resettlement program, which, after 23 years, was still a stalemate (Diaw & Tiani, 2010). A 2008 case study of Cameroon's Dja reserve found a group of Batwa (an IP) whose totem animal was the elephant were evicted to protect the 'core' area. However, the elephants in that core area followed the Batwa outside the reserve as the elephants knew the Batwa had protected them for many years (Pers. comm. Batwa leader, RRI Mbalmayo workshop, 2008).

Losing livelihoods and cultural identities weakens the integrity of people, especially IPs who are so connected to place. They are no longer able to defend their rights or retain their responsibilities and can become impoverished beggars.

## 8.4. Sanctioning indigenous practices

Fortress conservation has shown little respect for indigenous hunting, gathering, animal rearing or agricultural practices which

<sup>7</sup> Concern about shoot-to-kill policies for poachers is not to diminish the risks posed to park rangers, who are also subject to unwritten shoot-to-kill policies by increasingly dangerous and organized poachers, especially those associated with the ivory trade. Nevertheless, the sanctioned killing of Indigenous Peoples and others for conducting longstanding traditions on their own ancestral lands is a shocking abuse of human rights.

<sup>8</sup> The 21 countries are Australia, Brazil, Cameroon, China, Colombia, DRC, Ecuador, India, Indonesia, Kenya, Liberia, Madagascar, Malaysia, Mexico, Nepal, Papua New Guinea, Peru, Philippines, South Africa, United States of America and Venezuela. Springer, Jenny and Fernanda Almeida. 2015. PAs and the land rights of Indigenous Peoples and local communities. Washington, DC: Rights and Resources Initiative.

<sup>9</sup> The median investment by Indigenous Peoples and local communities is therefore US\$3.57 compared to Waldron's global average of \$14.70/ha for all conservation and biodiversity activities and the estimate of US\$ 7 per ha. for PAs alone

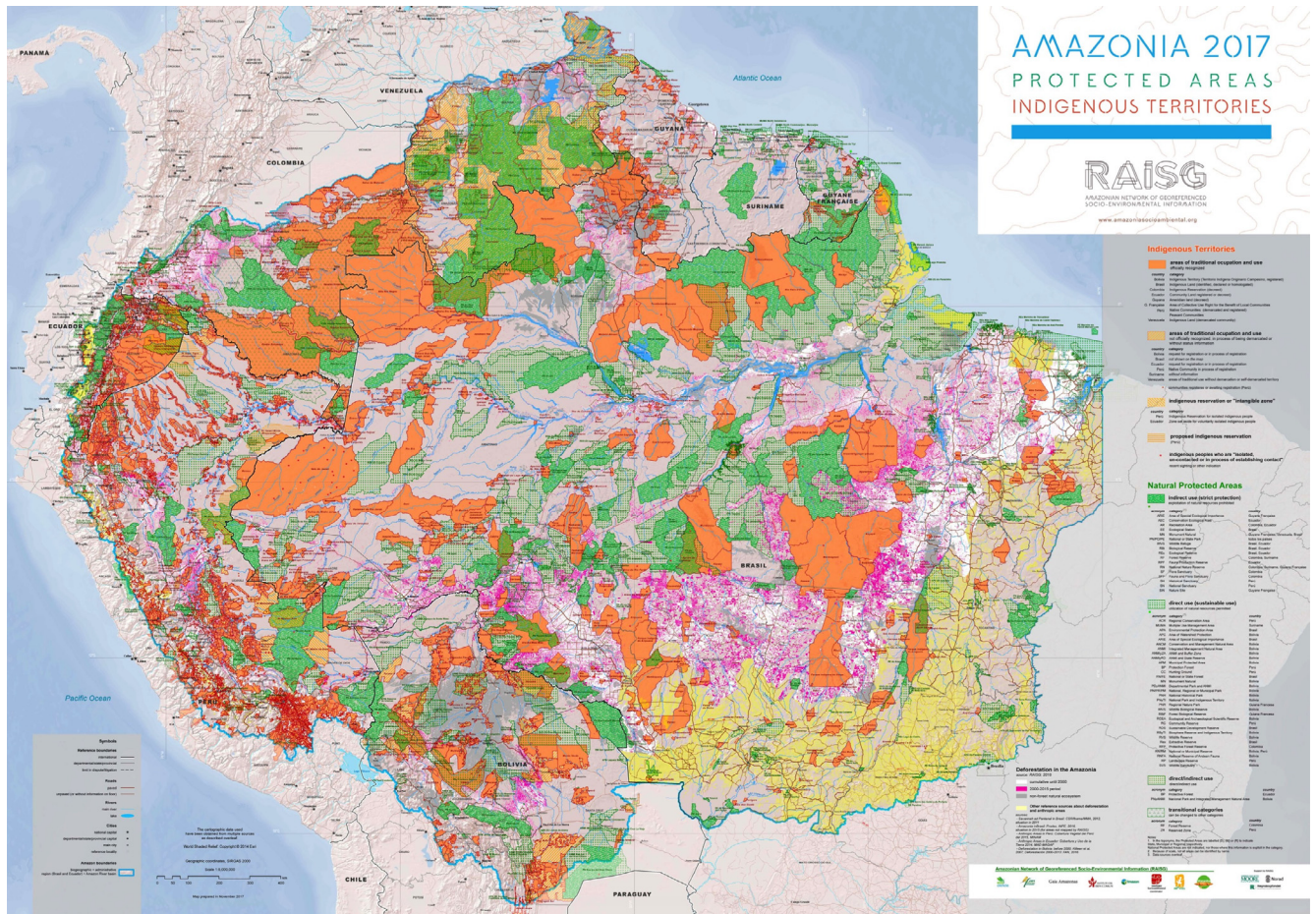


Figure 1. RAISG map of Indigenous territories and PAs in the Amazon Basin, 2017.

evolved over long periods—despite the fact that many of these practices are, broadly, sustainable. While many IPs have practiced shifting agriculture for thousands of years as a management technique to shape the forests now enclosed in PAs, this practice is often vilified and/or criminalized, irrespective of their impacts on biodiversity (Ayari & Counsell, 2017; Colfer, Alcorn, & Russell, 2015; Padoch and Piñedo-Vasquez, 1996). However, there are exceptions, for example, in the Parque Natural Sierra de Aracena and Picos de Aroche in Spain, as there is, generally, a greater acceptance of traditional agriculture in Europe.

A 2016 study reported local medical personnel in the Democratic Republic of the Congo (DRC) requested the World Food Programme to provide food to starving residents of the Tumba Ledima Reserve as part of a planned REDD+ (Reducing Emissions from Deforestation and Forest Degradation) park expansion process. This was because the DRC government did not allow them to hunt and gather traditional foods, despite limited reliable information about the status of flora or fauna within the ecosystem (Pyhälä et al., 2016). Restrictions on the use of PAs by IPs for livestock pasture reduced biodiversity loss in their grazing systems where ecosystems and wildlife evolved jointly with human activity (Scott, 2017, <http://www.corneredbyPAs.com/Congo>). Yet, there are positive example of collaborative management with IPLCs. For example, access to important non-timber forest products in Kibale and Mount Elgon National Parks in Uganda (Barrow, Gichohi, & Infield, 2000).

In the Biligiri Rangaswamy Temple Wildlife Sanctuary in Karnataka state of India, the absence of customary management

due to the exclusion of the Soligas IPs led to an invasion of the reserve by weeds, especially *Lantana camara* (Rai & Madegowda, 2018; <https://www.corneredbypas.com/india>). Many state and nongovernmental agencies believe the weeds need to be controlled, but some conservationists opposed allowing local people to enter the reserve to physically remove weeds because, in their view, the presence of people would adversely affect wildlife. Park staff in the Indian Bharatpur Bird Sanctuary surreptitiously introduced buffalo and cattle into the park in the 1990s, without permission, recognizing the endemic and threatened bird habitat would disappear without grazing to reshape the grassland to its earlier condition (<https://www.corneredbypas.com/india>).

### 8.5. Conflicts

The majority of conflicts between PAs and IPs are not visible at national or global levels because: a). they occur in remote areas and are seldom reported; and b). they often occur in landscapes embedded in larger conflicts, thus making it easier for conservation agencies and the public to ignore indigenous rights. Some governments have legitimate processes to receive citizens' petitions for help in local conflicts. For example, the majority of complaints received by the Defensor del Pueblo and Ministry of Culture in Peru are related to land rights conflicts, including but not limited to PA conflicts (USAID, 2012). Most complaints registered in Peru relate to land-grabbing, resource extraction, and infrastructure, all of which threaten biodiversity and IPs (Tebtebba Foundation, 2010).

In an assessment of 34 conflicts between IPs and PAs in 21 countries (Springer & Almeida, 2015),<sup>10</sup> only ten of the 21 countries had legislation for restituting lands to IPs. Even then, the application was weak. Seven of the 21 countries recognized IP land rights in PAs. Six of them had laws allowing for the eviction and relocation of IPs for creating PAs, even though this violates internationally agreed indigenous rights (Poirier & OSTERGREN, 2002).

#### 8.6. Threats to other traditional societies

In some regions, particularly in sub-Saharan Africa, ancestral and traditional societies have not claimed the IP status, but govern their land use through traditional institutions. Where national laws do not recognize such societies' rights nor their vulnerability, IUCN and the CBD consider these societies outside their IP commitments. There are, then, few channels of recourse to apply when PAs are created or gazetted when they overlap their lands. This is also a major issue in the Arctic Rim (Gauthier, 2016), the Mekong Basin, the Sahel and sub-Saharan Africa where national boundaries were drawn in colonial times. This separated many peoples who moved freely across boundaries (Tagliarino, 2017), for example, the Maasai in Kenya and Tanzania. The UN Special Rapporteurs have received numerous complaints from traditional Arctic peoples whose fishing or hunting/gathering became illegal (Gauthier, 2016). Because many sub-Saharan vulnerable minorities are not considered IPs, the World Bank revised its standards to include sub-Saharan vulnerable minorities as requiring special assessment and specific interventions to ensure positive impacts from loans or grants.

#### 8.7. Tourism and potentially negative impacts

There are counter-narratives emerging questioning the use of current tourism strategies to finance public PAs.<sup>11</sup> Many countries and donors encouraged tourism in and around PAs to generate revenues which could increase the flow of resources to PAs and their conservation. The critique is two-fold. First, tourism fees and revenues often revert to general revenue, and do not increase a respective PA's funding. Second, reliance on tourism as a major PA strategy leads governments to favor elite and/or foreign tourism which can ignore the rights of IPLCs over land and resources, their cultural heritage and traditional livelihoods.

For example, Machigenga communities in Peru's Manu Biosphere Reserve, suffered from a lack of voice in park management planning and inequities relating to growing tourism (Baldovino & Calmet, 2018). Now, there is dialogue between them and the Parks authorities, but it is still incipient (<https://cornered-byPAs.com/Peru>).

For 28 years, the Maasai in Tanzania sought to remedy the expropriation of their land by Sukenya Farm, totaling approximately 5,000 ha (Ngitiko, Sinandei, Meitaya, & Nelson, 2010). Further the Maasai continue to lose lands and livelihoods associated with the Serengeti National Park and the Ngorongoro Conservation Area in Tanzania, and the Maasai Mara National Reserve in Kenya. This includes, for example, a 400,000-hectare hunting license in the Loliondo area awarded to outsiders with no significant benefits accruing to the Maasai of the area (Vidal, 2014, 2016; Oakland Institute, 2018). A similar story holds for the loss of large areas of land for wheat farming from the Barabaig people in the Hanang plains in Tanzania. This acquisition of land contravened the law, as it did not respect Barabaig customary rights (Lane, 2017; Swift, 2018).

#### 8.8. Lack or failure of legal grievance or reconciliation mechanisms

Most conservation organizations have only recently adopted grievance mechanisms with still limited monitoring of their effectiveness (Makagon, 2014). Conservation International has designed a complaints mechanism in consultation with indigenous communities in 14 countries. In 2011, IUCN established the Whakatane Mechanism to undertake assessments as a model for nation states, to make recommendations and mediate where indigenous peoples have been negatively affected. Two Whakatane Mechanism pilot assessments took place in 2011 and 2012, in Mount Elgon, Kenya and in Ob Luang National Park, Thailand (Colchester et al., 2008; whakatanemechanism.org; Buergin, 2014). But the implementation of the findings of the Whakatane mechanism has stalled due to lack of financial support or strong interest from the CBD, despite some positive advances (United Nations, 2016).

There have been calls for a Truth and Reconciliation Initiative for PAs, which could reduce conflict and produce dialogue on the damage caused by forced resettlements and loss of access to resources resulting from PA establishment. Using the Truth and Reconciliation Commission process for conservation was first raised at the IUCN WPC in Durban in 2003. Since the Durban WPC there has been much talk about rights-based approaches and especially that IPs are rights-holders, not merely stakeholders (DeRose, 2003); and the importance of recognizing the value and importance of traditional knowledge (Sheppard, 2003). The IUCN Commission on Environment, Economics and Social Policy (CEESP), after the IUCN WCC in 2004 did develop an area of work focusing on rights-based approaches to conservation to ensure respect for, and promotion of human rights (Mead, 2016). The restitution of indigenous lands in PAs has been a priority for IPs for decades (MacKay, 2002). Although restitution was one target of the Durban Action Plan, there are few examples of restitution being put into practice since then (United Nations, 2016).

### 9. How have ipcls repounded?

The response of IPs to the taking of lands and waters for PAs and the related abuses of their rights has been consistent. It involved declarations, marches, litigation, and engagement in national and international negotiations. Their aim is to hold or gain ground against the existential threats faced by IPs. Some declarations have gained considerable public attention.<sup>12</sup> Litigation has pursued existing laws through national and international courts (Indian Law Resource Center, 2015; MacKay, 2017). IPs sought to increase their economic power to build their movements (Wahono et al., 2012). Information tools include evidence gathering and policy monitoring by the Indigenous Navigator Initiative,<sup>13</sup> launched in 2017, or the use of modern technologies, including drones, to map and monitor their borders (Paneque-Gálvez et al., 2017). Indigenous Peoples Organizations (IPOs) have sought alternatives, such as "indigenous REDD+" or the declaration of ICCAs, endorsed by the IUCN and CBD, to protect their lands (Kothari, Corrigan, Jonas, & Shrumm, 2012; Walsh, 2016; Walker et al., 2014; Stevens et al., 2016; Garzon, 2017). They attempted to build bridges between their systems of governance and national and international governance institutions to address past wrongs and facilitate collaboration with the state. For example, in Australia, Canada and South Africa, IPs have engaged in national truth and reconciliation processes.

<sup>10</sup> Tebtebba maintains an online library of declarations ([www.tebtebba.org/index.php/all-resources/category/15-indigenous-peoples-declaration-statements-and-interventions](http://www.tebtebba.org/index.php/all-resources/category/15-indigenous-peoples-declaration-statements-and-interventions)).

<sup>11</sup> See [indigenousnavigator.org](http://indigenousnavigator.org).

<sup>12</sup> See discussion of post-2020 conservation dialogue in Convention on Biological Diversity (CBD) 2019.

<sup>13</sup> Nevertheless, mining rights still take precedence over either Indigenous Peoples' rights or the right of public authorities to establish PAs.



## 10. New approaches for effective equitable conservation

In the last decade, as countries strived to meet Aichi Biodiversity Target 11, the area under PAs continued to expand and is likely to continue under the post-2020 agreement.<sup>14</sup> By 2017, 33% of countries had achieved the global aim of placing 17% of their terrestrial area and inland waters in PAs (Cayton, 2018). By 2018, PAs cover 45 million km<sup>2</sup> worldwide, comprising 20 million km<sup>2</sup> (15%) of the world's land surface outside Antarctica, and 25 million km<sup>2</sup> (7%) of the world's oceans (IUCN, 2017). Some conservationists now promote a '50% for nature' goal as essential in the battle against 'development' (Dinerstein et al., 2015; Locke, 2013; Miller, Soule, & Terborgh, 2014; Wilson, 2016). Without consideration of indigenous rights, adopting such a goal could greatly increase the negative human impacts already caused by the existing expansion of PAs (Buscher et al., 2016; Orozco-Quintero, Burlando, & Robinson, 2015; Schleicher, 2019; Vidal, 2016).

Public PAs and community lands are challenged by many forces: growing populations, urbanization, tourism, climate change, resource extraction and development policies. Some suggest that the PA model has become a twentieth century relic (Corson et al., 2014). The PA model needs reform and be supplemented by approaches consistent with human rights, the realities of collective tenure and rights (Baldwin and Beazley, 2019; Zurba, Beazley, & English, 2019), and with conservation.

A significant proportion of threatened biodiversity occurs outside PAs in areas over which IPLCs have rights (whether fully recognized and secured, or in conflict). Therefore, it makes sense for IPLCs to be supported. This combined with our increased understanding of ecological dynamics, the importance of connectivity, as well as questioning whether PAs can assure functional ecosystems, has led to greater attention being paid to biodiversity conservation over wider negotiated landscapes (Hance, 2016; Baldwin and Beazley, 2019; Ban and Frid, 2017), based on a variety of conservation types, for example, a community forest, sacred grove, national park, riparian protection, conservation agriculture. It is the combination and connectivity that helps assure conservation sustainability.

New best practices for co-management of public PAs, recognition and titling of communal lands and resources of IPLCs, and redressing past violations are expanding in some countries (Rights and Resources Initiative, 2018). In some cases, conservation NGOs supported the strengthening of governance by IPs' organizations and local governments (Jonas et al., 2016). For example, in Bolivia, WCS worked with the Tacana, Lecos, and T'simane peoples living in and around the Madidi National Park and the Pilon Lajas Biosphere Reserve and on indigenous land to secure their land rights, strengthen their institutions, secure sustainable livelihoods, strengthen their cultures, and reduce deforestation (<https://www.corneredbypas.com/world>). In East and Southern Africa there is a growing movement to rethink the safari tourism model and address long-standing rights-based conflicts (Mbaria & Ogada, 2018).

Best practices include a mapping exercise facilitated by IUCN in Central America, that documented that most of the remaining forests and marine resources lie within or border indigenous land (IUCN, 2016). WWF Indonesia, over the past five years, moved from including work with indigenous peoples under conservation targets to making it a target itself, working directly with IPs to document and integrate their territories in government plans. WWF Cameroon advocated for a statutory national FPIC, but in 2017

had a formal complaint lodged against it by the Organization for Economic Cooperation and Development (OECD) for violating FPIC in Cameroon (Survival International, 2017). Some transnational corporations provide support for securing collective land rights, for example, in Indonesia and the United Republic of Tanzania (IUCN, 2010).

Some NGOs monitor the performance of conservation implementation, among them:

a) *Just Conservation* <https://justconservation.org/about>; b) Rainforest Foundation-UK's 2017 transparency policy related to Central Africa (<https://www.rainforestfoundationuk.org/mappingfor-rights>); and c) International rights NGOs (e.g. Amazon Watch, Earthrights, the Forest Peoples Programme, Survival International, and Cultural Survival) support for specific rights efforts of IPs involving PAs (Springer & Almeida, 2015).

The CIHR 2014 white paper assessing progress since 2009 identified three actions for CIHR partners to achieve the change envisioned 15 years ago at the IUCN WPC in Durban: a) build strong institutional cultures to anticipate and address rights-related issues; b) address situations where the rights of key stakeholders are unclear or contested; and c) create accountability mechanisms to serve the CIHR member institutions, the people affected, and the conservation community (CIHR, 2014).

Some countries, such as Australia and Canada, started to reconcile PAs as part of larger decolonization initiatives. Canadian IPs are engaged in a long dialogue process to protect their territories, identity, and rights to self-determination within the context of interconnectivity with Canadian society (Indigenous Circle of Experts, 2018). Canadian IPs and the Canadian government are discussing a national approach to conservation where "continued human presence on the land and water is seen as positive and essential, with humans being considered an integral part of nature." To operationalize this, a new type of PA, 'indigenous protected and conserved areas', was proposed for implementation in Canada through diverse partnerships or under the direction of IPs.<sup>15</sup>

Some countries tried to fulfill their commitments to respect UNDRIP. They revised national laws and regulations to enable recognition of PAs governed by or with IPLCs. Some have created conservation alternatives alongside their PA programs, for example: a). Peru's national program of payments to communities for conserving their forests; b). REDD + projects that pay communities directly for conserving forests (Githiru and Njambuya, 2009; and c). community-based natural resource management programs enabling communities to earn income from tourism and hunting when they maintain wildlife habitat (Hulme and Murphree, 2001).

## 11. Conclusions

IPLCs are under increasing pressure (Jones, 2018). They are often cornered by PAs, or by government concessions for resource extraction, or commercial agriculture. Countries striving to meet the Aichi Biodiversity Target of placing 17% of the Earth's land area and inland waters in PAs by 2020 have not paid adequate attention to rights-based alternatives and the real role of IPs and communities in conservation, and now there are risks of further amplification of these problems if parties to the CBD adopt even more ambitious conservation targets without explicit recognition of the rights, and contributions of IPLCs (Venter et al., 2014). But, PAs (all sorts) will only really survive if they address human concerns and gain the support of local and indigenous peoples (Yin, 2017). In essence they must stop being isolated islands and become part of lived-in landscapes (Barrow and Fabricius, 2002).

<sup>14</sup> As the reconciliation processes of Canada and Australia evolved, these were developed to respond to 'internal colonialism' rather than emulating models of 'post-conflict' (Baldwin and Beazley, 2019; Short, 2006; McDermott, 2018; Wilson, 2015; Moses, 2011).

<sup>15</sup> Nevertheless, mining rights still take precedence over either Indigenous Peoples' rights or the right of public authorities to establish PAs

In reality, there are few 'open access' areas left to declare new PAs, without creating more conflicts and violations, which affect IPs culture, well-being, livelihoods, and security without evidence of clear conservation outcomes.

PA funding has not grown much over the past 14 years, relative to the number and area of public reserves and coverage of community conservation initiatives, even with climate change investments and increased recognition of the value of ecosystem services and biodiversity. Also, a large number of existing PAs, exist on paper or have lost the biodiversity they were designated to protect.

PAs will continue to play an important role in biodiversity conservation, but an overreliance on one form of conservation is risky and inadequate to support connectivity between PAs or provide for livelihoods (Brown and Kathy Brown, 2009). Despite commitments in national and international law, many public PA authorities continue to repress the rights of IPs to land and livelihoods. This is due to the lack of rights protection in national laws and regulations, vested interests in exclusion, lack of funding to pursue alternatives, or lack of staff or staff training. Yet, many conservation organizations continue to support PAs, with funds invested in expanding PA networks, creating corridors and transboundary connections between PAs. International actors also support increased enforcement of anti-poaching and other measures that do not comply with UNDRIP commitments.

From a conservation perspective shifting funding priorities more in favor of IPLCs appears to be more affordable, financially viable, and may be essential to achieve effective long term conservation. New best practices include co-management of public PAs, recognition and titling of communal lands and resources of IPLCs and redressing past violations. These approaches are now expanding in some countries.

GEF, for example, redefined its program of support to the CBD to assign half of the planned funding to 'biodiversity mainstreaming' and began more integrated funding to meet the goals of multiple conventions. This 'mainstreaming' could be directed at community-led conservation where rights are recognized. Then, financial resources would be shared more equally between financing both public PAs, and high conservation-value areas under the ownership, governance and management by IPLCs. In addition, the rights of IPs need to be secured in and around existing and planned PAs with rights-based governance, including those applied in ICCAs, as defined in the CBD.

Conservation by and with IPLCs, and respecting their tenure and rights, is our best hope for biodiversity conservation in a changing climate (Stevens et al., 2014). They are important for achieving the Aichi biodiversity targets, yet do not violate the rights commitments of CBD and IUCN members. There are clear strategies to achieve this.

First, access to legal grievance and restitution processes are essential to 'uncorner' IPLCs, as is shifting the definition of PAs beyond state ownership and management.

Commitments for regular reporting of progress to measure how countries, donors and conservation interventions progress in terms of recognizing and respecting IPs' rights need to be made real. At present there is no snapshot of the current state of affairs, there is no mechanism for such reporting, and violations risk being perpetuated without a clear and effective redress mechanisms.

Second, a more accessible and affordable road to justice is required. Existing options are confined to specific sources of financing (e.g. the multilateral development banks) or NGOs, who may be powerless to change government policy or behavior. A global conservation monitoring and grievance mechanism would provide an accurate, independent record of progress and provide an incentive for action (Makagon, 2014).

Third, 'truth and reconciliation initiatives' for PAs can begin to address the persistence of legacy problems at local / national

scales. This would be linked to the global conservation monitoring and grievance or national systems. It is neither easy to challenge the power or overcome the resistance to change of agencies and other actors who, in the past, have denied indigenous rights<sup>16</sup> (Witter & Satterfield, 2018; Finegan, 2018). Reconciliation processes could be linked to reviews of PA systems and the relative values of particular PAs, which would enable governments to understand the limits of existing systems and the value of collaboration with IPs.

Fourth, The post-2020 biodiversity framework should be modified to include UNDRIP as integral to country-level implementation. This would prevent the targets from further dislocating IPs. The implementation of future area-based Targets could require that PAs sites of reconciliation can affirm indigenous rights; and support conservation and sustainable use by IPs in line with the interconnectedness of people and nature.

Fifth, governments and conservation agencies need to recognize and respect the very large numbers and size of the various forms of IPLC. These support conservation and connectivity; greatly increase the area under conservation; and are a cost-effective conservation approach that is good for conservation and good for people.

If such steps are taken, it will demonstrate that the PAs can evolve to embody reconciliation, recognition, respect, and collaboration between IPs and nations. Conservation funding could be invested in investigating continued abuses against indigenous rights through a transparent, accountable complaints mechanism, thereby beginning national reconciliation processes. This, ultimately, will be good for conservation, good for IPs and good for sustainable development. As the reconciliation processes of Canada and Australia evolved, these were developed to respond to 'internal colonialism' rather than emulating models of 'post-conflict' (Baldwin and Beazley, 2019; Short, 2006; Wilson, 2015; Moses, 2011). In this way, reconciliation will re-invigorate conservation. With more direct funding of IPLCs, this will create a more resilient world in which indigenous rights, values, knowledge and aspirations are respected in PAs.

### Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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<sup>16</sup> As the reconciliation processes of Canada and Australia evolved, these were developed to respond to 'internal colonialism' rather than emulating models of 'post-conflict' (Baldwin and Beazley, 2019; Short, 2006; Wilson, 2015; Moses, 2011).

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## References

- Amend, S., & Amend, T. (Eds.). (1995). *National parks without people? The South American experience*. Gland, Switzerland: IUCN.
- Angelsen, A. (2017). REDD+ as result-based aid: General lessons and bilateral agreements of Norway. *Review of Development Economics*, 21(2), 237–264.
- Annecke, W., & Masubele, M. (2016). A review of the impact of militarization: The case of rhino poaching in Kruger National Park, South Africa. *Conservation and Society*, 14(3), 195–204.
- Ayari, I., & Counsell, S. (2017). *The human cost of conservation in the Republic of Congo: Conkouati-Douli and Nouabale-Ndoki National Parks and their impacts on the rights and livelihoods of forest communities*. London: Rainforest Foundation-UK.
- Baldovino, S., & Calmet, A. (2018). Indigenous peoples and the Manu National Park. Case study for Cornered by Pas. Retrieved from <http://www.corneredbypas.com/Peru>.
- Baldwin, R., & Beazley, K. (2019). Emerging paradigms for biodiversity and PAs. *Land*, 8, 43. <https://doi.org/10.3390/land8030043>.
- Ban, N., & Frid, A. (2017). Indigenous people's rights and marine PAs. *Marine Policy*, 87(2018), 180–185. <https://doi.org/10.1016/j.marpol.2017.20.020>.
- Barbora, S. (2017). Riding the rhino: conservation, conflicts, and militarization of Kaziranga National Park in Assam. *Antipode*, 49(5), 1145–1163.
- Barrow, E., & Fabricius, C. (2002). Do rural people really benefit from protected areas – Rhetoric or reality. *Parks*, 12(2), 67–79.
- Barrow, E. (2010). Falling between the cracks of conservation and religion: The role of stewardship for sacred trees and groves. In B. Verschuuren, R. Wild, & J. McNeely (Eds.), *Sacred natural sites: Conserving nature and culture* (pp. 42–52). London: Earthscan.
- Barrow, E. (2019). *Our future in nature? Trees, spirituality and ecology (+395 xiv)*. Indiana: Balboa Press.
- Barrow, E., Kamugisha, J., Nhamumbo, I., Oyono, R., & Savadogo, M. (2016). Who owns Africa's forests? Exploring the impacts of forest tenure reform on forest ecosystems and livelihoods. *Forests, Trees and Livelihoods*, 25, 132–156.
- Barrow, E., & Murphree, M. (2001). Community conservation from concept to practice. In D. Hulme & M. Murphree (Eds.), *African wildlife and livelihoods: The promise and practice of community conservation* (pp. 24–37). Oxford: James Currey.
- Barrow, E. G. C., Gichohi, H., & Infield, M. (2000). *Rhetoric or Reality? A Review of Community Conservation Policy and Practice in East Africa*. London: IIED and IUCN.
- Bassi, L. (2017). Measuring biodiversity in ICCAs: problems and possibilities. Paper presented at the XVI Biennial Conference of the International Association for the Study of the Commons, Utrecht, Germany. Retrieved from [www.iasc2017.org/wp-content/uploads/2017/06/3C\\_Leonardo-Bassi.pdf](http://www.iasc2017.org/wp-content/uploads/2017/06/3C_Leonardo-Bassi.pdf).
- Borrini-Feyerabend, G., Kothari, A., & Oviedo, G. (2004). Indigenous and local communities and PAs: Towards equity and enhanced conservation. Guidance on Policy and Practice for Co-managed PAs and Community Conserved Areas. PAs Best Practice Guidelines Series No. 11, Gland, Switzerland and Cambridge (UK): IUCN.
- Brockington, D., & Igoe, J. (2006). Eviction for conservation: A global overview. *Conservation and Society*, 4(3), 424–470 <http://www.conservationandsociety.org/text.asp?2006/4/3/424/49276>.
- Brosius, J. (2004). Indigenous peoples and PAs at the world parks congress. *Conservation Biology*, 18, 609–612.
- Brown, F., & Kathy Brown, Y. (2009). *Staying the course, staying alive – Coastal First Nations fundamental truths: Biodiversity, stewardship and sustainability* (p. vii). Victoria, Canada: Biodiversity BC.
- Brown, D. (1998). Participatory biodiversity conservation: Rethinking the strategy in the low tourist potential areas of tropical Africa. *Natural Resource Perspectives* (p. 33). London: Overseas Development Institute.
- Buergin, R. (2014). German Forest Related Bilateral Development Cooperation in the Global Context and In the Case Study Countries of Cameroon, Democratic Republic of the Congo and Indonesia. Working Group Socio Economics of Forest Use in the Tropics and Subtropics at the University of Freiburg, Germany. GDC\_Forest\_Sector\_Cooperation in Congo, Indonesia.
- Burch, W., Singh, S., Kanel, K. (2003). Mid-term evaluation report of enterprise-based biodiversity conservation – Nepal Project. USAID Global Conservation Program.
- Buscher, B., & Ramutsindela, M. (2016). Why Southern Africa's peace parks are sliding into war parks. *The Conversation*, February 16, 2016. Retrieved from <http://theconversation.com/why-southern-africas-peace-parks-are-sliding-into-war-parks-53458>
- Buscher, B., Fletcher, R., Brockington, D., Sandbrook, R., Adams, W., Campbell, J., et al. (2016). Half-earth or whole earth? Radical ideas for conservation and their implications. *Oryx*, 2016. <https://doi.org/10.1017/S0030605316001228>.
- Campos, M., & Martin, C. (2014). *An analysis of international conservation funding in the Amazon*. Palo Alto, USA: Gordon and Betty Moore Foundation.
- Canadian House of Commons. (2017). Taking action today: establishing PAs for Canada's future, p. 55. Report of the Standing Committee on Environment and Sustainable Development. 42nd Session of Parliament, 1st Session. Ottawa. Retrieved from [www.ourcommons.ca/DocumentViewer/en/42-1/ENVI/report-5](http://www.ourcommons.ca/DocumentViewer/en/42-1/ENVI/report-5).
- Cayton, H. (2018). The role of biogeography in planning and designing marine PAs. Retrieved from <https://conservationcorridor.org/2018/04/the-role-of-biogeography-in-planning-and-designing-marine-protected-areas/>.
- Chapin, M. (2004). A Challenge to conservationists. *World Watch Magazine*, Nov/Dec; 17–31.
- Chhatre, A., & Agrawal, A. (2009). Trade-offs and synergies between carbon storage and livelihood benefits from forest commons. *PNAS*, 106(42), 17667–17670. <https://doi.org/10.1073/pnas.0905308106>.
- CIHR. (2014). Human rights in conservation: Progress since Durban. White paper. Retrieved from [www.thecihr.org/s/CIHR\\_HRS\\_-\\_since-Durban\\_2014-cl8w.pdf](http://www.thecihr.org/s/CIHR_HRS_-_since-Durban_2014-cl8w.pdf)
- Cisneros, P., & McBreen, J. (2010). *Superposición de territorios indígenas y áreas protegidas en América del Sur*. Quito, Ecuador: IUCN-DFID Department for International Development.
- Clay, J., Alcorn, J., & Butler, J. (2000). *Indigenous peoples, forestry management and biodiversity conservation*. Washington, D.C.: World Bank.
- Colchester, M., Ferrari, M., Nelson, J., Kidd, C., Zaninka, Z., Venant, M., Regpala, L., Balawag, T., Motin, B., & Lasimbang, B. (2008). *Conservation and Indigenous Peoples: Assessing the progress since Durban*. Moreton-On-Marsh, UK, Forest: Peoples Programme.
- Colfer, C., Alcorn, J., & Russell, D. (2015). Swidden and fallows: A global perspective on the global and local values of slash and burn (Chapter 3). In Malcolm Cairns (Ed.), *Shifting cultivation and environmental change: indigenous people, agriculture and forest conservation*. London: Routledge.
- Collins, M., & Mitchard, E. (2017). A small subset of PAs are a highly significant source of carbon emissions. *Scientific Reports*, 2017(7), 41902.
- Convention on Biological Diversity (CBD). (2019). Synthesis of views of parties and observers on the scope and content of the post-2020 global biodiversity framework. CBD/Post2020/Prep/1/Inf/1 24 January 2019.
- Corson, C., Gruby, R., Witter, R., Hagerman, S., Suarez, D., Greenberg, S., et al. (2014). Everyone's solution? Defining and redefining PAs at the convention on biological diversity. *Conservation and Society*, 12(2), 190–202.
- Counsell, S. (2018). The Congo's Nouabalé-Ndoki National Park: How Indigenous Lands Became an Emblem of Rooseveltian "Wilderness Conservation" in Africa Case study for Cornered by Pas. Retrieved from [www.corneredbyPAs.com/congo](http://www.corneredbyPAs.com/congo).
- Deguignet, M., Arnell, A., Juffe-Bignoli, D., Shi, Y., Bingham, H., Macsharry, B., & Kingston, N. (2017). Measuring the extent of overlaps in protected area designations. *PLOS*. <https://doi.org/10.1371/journal.pone.0188681>. Published: November 27, 2017.
- DeRose, A. (2003). Overview of community participation in Vth IUCN World Parks Congress. *Parks*, 14(2), 1–5. <https://doi.org/10.1371/journal.pone.0188681>.
- Diaw, M., & Tiani, A. (2010). Fences in our heads: A discourse analysis of the Korup resettlement stalemate. *Journal of Sustainable Forestry*, 29, 221–251. <https://doi.org/10.1080/10549810903548138>.
- Dinerstein, E., Olson, D., Joshi, A., Vynne, C., Burgess, N., Wikramanayake, E., ... Saleem, M. (2017). An ecoregion-based approach to protecting half the terrestrial realm. *BioScience*, 67(6), 534–545. <https://doi.org/10.1093/biosci/bix014>.
- Dowie, M. (2009). *Conservation refugees, the hundred-year conflict between global conservation and native peoples* (p. 2009). Cambridge, USA: The MIT Press.
- Embassy of Denmark in Bolivia, International working group on Indigenous Affairs (2009). *Rights of Indigenous Peoples: Cooperation between Denmark and Bolivia (2005–2009)*. La Paz, Bolivia: DANIDA/IWIGIA.
- Emerton, L., Bishop, J., & Thomas, L. (2006). *Sustainable Financing of PAs: A global review of challenges and options* (p. 12). Switzerland and Cambridge: IUCN, Gland.
- Finegan, C. (2018). Reflection, acknowledgement, and justice: A framework for indigenous-protected area reconciliation. *The International Indigenous Policy Journal*, 9(3). <https://doi.org/10.18584/iipj.2018.9.3.3>.
- First Peoples Worldwide. (2013). Indigenous Rights Risk Report presented to The SRI Conference on Sustainable, Responsible, Impact Investing. Retrieved from <https://rightsandresources.org/en/blog/first-peoples-worldwide-press-release-report-exposes-risk-to-shareholders-when-indigenous-rights-are-ignored/#.XMcXPCZ2POQ>.
- Fletcher, R., Dressler, W., Büscher, B., & Anderson, Z. (2016). Questioning REDD+ and the future of market-based conservation. *Conservation Biology*, 30(3), 673–675.
- Forest Peoples Programme. (2019). Transforming Conservation. Retrieved from <https://www.forestpeoples.org/sites/default/files/documents/Transforming%20Conservation%20%28full%20version%29%20%20Forest%20Peoples%20Programme%20Mar%202019.pdf>.
- Forest Peoples' Programme. (2018a). The central roles of Indigenous peoples and Local Communities in achieving global commitments on biodiversity. Technical policy brief for the HPLF on Sustainable Development Goal 15. October 10, 2018.
- Forest Peoples Programme. (2017). Indigenous Peoples' Rights and Conservation: Recent Developments in Human Rights Jurisprudence UK, background report

- prepared for [www.corneredbyPas.com](http://www.corneredbyPas.com). <https://www.forestpeoples.org/en/rights-based-conservation/news-article/2017/indigenous-peoples-rights-and-conservation-recent>.
- Garnett, S., Fa, J., Fernandez-Llamazares, A., Burgess, N., Molnár, Z., Robinson, C., ... Leiper, I. (2018). A spatial overview of the global importance of Indigenous lands for conservation. *Nature Sustainability*, 1, 369–374.
- Garzon, E. (2017). Amazon Indigenous REDD+: An innovative approach to conserve Colombian forests? *Mongabay* <https://news.mongabay.com/2017/01/amazon-indigenous-redd-an-innovative-approach-to-serve-colombian-forests>.
- Gauthier, M. (2016). RESERVED. *An Atlas on Indigenous Peoples facing Nature Conservation* <http://reserved.geo-graphics.org>.
- Gilligan, M. (2006). Is enforcement necessary for effectiveness? A Model of the international criminal regime. *International Organization*, 60(4), 935–967. <https://doi.org/10.1017/S0020818306060310>.
- Gindroz, A.-S. (2018). Indigenous Peoples in PAs in Indonesia: The case of Gunung Halimun Salak National Park. *Case study for Cornered by PAs*.
- Githiru, M., & Njambuya, J. (thiru and Njambuya). Globalization and biodiversity conservation problems: Polycentric REDD+ solutions. *Land*, 8(2), 35. <https://doi.org/10.3390/land8020035>.
- Gray, E., Veit, P., Altamirano, J., Ding, H., Rozwalka, P., Zuniga, I., Witkin, M., Borger, F., Pereda, P., Lucchesi, A., & Ussami, K. (2015). *The economic costs and benefits of securing community forest tenure: evidence from Brazil and Guatemala*. Washington, DC: World Resources Institute.
- Hance, J. (2016). Has Big Conservation Gone Astray 26 April. Retrieved from <https://news.mongabay.com/2016/04/big-conservation-gone-astray/>
- Halverson, C. (2018). The problem of overlap: The Panamanian Government Stalls on Indigenous Land Titling on PAs. *Case study for Cornered by PAs*.
- Healy, K. (2001). *Llamas, weavings and organic chocolate: Multicultural grassroots development in the Andes and Amazon of Bolivia*. Notre Dame, USA: University of Notre Dame Press.
- Henson, D., Malpas, R., & Údine, F. (2016). *Wildlife law enforcement in Sub-Saharan African PAs: A review of best practices*. Gland: IUCN. Occasional Paper of the IUCN Species Survival Commission No. 58.
- Hulme, D., & Murphree, M. (2001). *African wildlife and livelihoods: The promise and performance of community conservation* (p. 336). Oxford: James Currey.
- IACHR. (2014). Indigenous peoples in voluntary isolation and initial contact in the Americas: Recommendations for the full respect of their human rights. OEA/Ser. L/V/II Doc. 47/13. <http://www.oas.org/en/iachr/indigenous/docs/pdf/report-indigenous-peoples-voluntary-isolation.pdf>.
- Indian Law Resource Center and IUCN Commission on Environment, Economics and Social Policy (CEESP) (2015). *Conservation and indigenous peoples in Mesoamerica: A guide*. Washington D.C: Indian Law Resource Center.
- Indigenous Circle of Experts. (2018). We rise together: achieving pathway to Canada Target 1 through the creation of indigenous protected and conserved areas in the spirit and practice of reconciliation (p. 48). Her Majesty the Queen in Right of Canada.
- IUCN. (2010). Indigenous Peoples in the IUCN Programme. Submission of the IUCN to the 9th Session of the UNPFII, New York City, 19–30 April.
- IUCN. 2016. Retrieved from [https://live-burness.pantheonsite.io/wp-content/uploads/2016/05/IUCN-Map-Press-release\\_English-FINAL.pdf](https://live-burness.pantheonsite.io/wp-content/uploads/2016/05/IUCN-Map-Press-release_English-FINAL.pdf) and <https://www.iucn.org/content/map-shows-indigenous-peoples-guardians-central-american-ecosystems> (this is an update of mapping done by Mac Chapin in the early 2000s).
- IUCN and World Commission on Pas. (2017). *IUCN Green List of Protected and Conserved Areas: Standard, Version 1.1*. Gland, Switzerland: IUCN.
- Jepson, P., Caldecott, B. L., Milligan, H., & Chen, D. (2015). *A framework for protected area asset management*. Oxford, UK: Smith School of Enterprise and the Environment, University of Oxford.
- Jonas, H., Makagon, J., & Roe, D. (2016). Conservation standards: From rights to responsibilities. IIED Discussion Paper August 2016. London: IIED.
- Jones, Kendall R., Venter, O., Fuller, R. A., Allen, J. R., Maxwell, S. L., Negret, P. J., & Watson, J. E. M. (2018). One-third of global protected land is under intense human pressure. *Science*, 360(6390), 788–791. <https://doi.org/10.1126/science.aap9565>.
- Juffe-Bignoli, D., Burgess, N., Bingham, H., Belle, E., de Lima, M., Deguignet, M., et al. (2014). *Protected Planet Report*. Cambridge, UK: UNEP-WCMC.
- Kashwan, P. (2017). Inequality, democracy and the environment: A cross-national analysis. *Ecological Economics*, 131, 139–151.
- Kothari, A., Corrigan, C., Jonas, H., Neumann, A., & Shrumm, H. (Eds.). (2012). *Recognising and supporting territories and areas conserved by IPLCs: Global overview and national case studies*. Montreal, Canada: Secretariat of the Convention on Biological Diversity, ICCA Consortium, Kalpavriksh, and Natural Justice. CBD Technical Series No. 64.
- Lane, C. (2017). *Barabaig – Life, love and death in Tanzania's Hanang plains*. River Books, Bangkok.
- Langton, M., Rhea, Z., & Palmer, L. (2005). Community-oriented PAs for IPLCs. *Journal of Political Ecology*, 12, 23–50.
- Lee, E., & Tran, T. (2016). From boardroom to kitchen table: Shifting the power seat of indigenous governance in protected area management, Tebrakunna country. *Australian Aboriginal Studies*, 2016(2), 81–93.
- Lee, D., Pistorius, T. (2015). The impacts of international REDD+ finance (p. 7). <https://www.google.com/search?q=Donna+Lee+and+Pistorius&ie=utf-8&oe=utf-8&client=firefox-b-1-ab>.
- Leverington, F., Costa, K. L., Pavese, H., Lisle, A., & Hockings, M. (2010). A global analysis of protected area management effectiveness. *Environmental Management*, 46(5), 685–698. <https://doi.org/10.1007/s00267-010-9564-5>.
- Locke, H. (2013). Nature needs half: A necessary and hopeful agenda for PAs. *Parks*, 19(2), 9–18.
- Lockwood, M., & Quintela, C. (2006). Finance and economics. In M. Lockwood, G. Worboys, & A. Kothari (Eds.), *Managing PAs: a global guide*. London: Earthscan.
- Lopoukhine, N., Crawhall, N., Dudley, N., Figgis, P., Karibuhoye, C., Laffoley, D., et al. (2012). Protected Areas: Providing solutions to 21st century challenges. *S.A.P.I.E. N.S.*, 5, 117–131.
- MacKay, F. (2002). Addressing past wrongs: Indigenous Peoples and PAs, the right to restitution of lands and resources. FPP Occasional Paper. Moreton-on-Marsh, UK: Forest Peoples Programme.
- MacKay, F. (2017). *Indigenous Peoples' Rights and Conservation: Recent Trends in Human Rights Jurisprudence*. Moreton-in-Marsh, UK: Forest Peoples' Programme <https://www.forestpeoples.org/en/rights-based-conservation/news-article/2017/indigenous-peoples-rights-and-conservation-recent>.
- Makagon, J. (2014). Human Rights Standards for Conservation, Part III. Which redress mechanisms are available to communities affected by conservation initiatives? IIED Discussion Paper. London: IIED.
- Marjinen, E., & Verweijen, J. (2016). Selling green militarization: The discursive (re) production of militarized conservation in the Virunga National Park, Democratic Republic of the Congo. *Geoforum*, 75, 274–285.
- Margoluis, R., & Salafsky, N. (1998). *Measures of success: Designing, managing and monitoring conservation and development projects*. Washington, DC: Island Press.
- Massé, F., & Lunstrum, E. (2016). Accumulation by securitization: Commercial poaching, neoliberal conservation, and the creation of new wildlife frontiers. *Geoforum*, 69, 227–237.
- Mbaria, J., & Ogada, M. (2018). *The big conservation lie*. Auburn, Washington, USA: Lens & Pens Publishing.
- McCann, N. (2017). Attacks on 'militarized conservation' are naïve. *Mongabay*, October 10. Retrieved from <https://news.mongabay.com/2017/10/attacks-on-militarized-conservation-are-naive-commentary>
- McCarthy, C., Shinjo, H., Hoshino, B., & Enkhjargal, E. (2018). Assessing local indigenous knowledge and information sources on biodiversity, conservation and protected area management at Khuvsgol Lake National Park, Mongolia. *Land*, 7, 117.
- Mead, A. (2016). Editorial. *CEESP Policy Matters* 20, pp. 6–7.
- Miller, B., Soule, M., & Terborgh, J. (2014). New conservation surrender to development? *Animal Conservation*. <https://doi.org/10.1111/acv.12127>.
- Molnar, A., Scherr, S., & Khare, A. (2004). *Who conserves the world's forests?* Washington, DC: Forest Trends.
- Moses, D. (2011). Official apologies, reconciliation, and settler colonialism: Australian indigenous alterity and political agency. *Citizenship Studies*, 15, 145–159. <https://doi.org/10.1080/13621025.2011.549698>.
- Nakamura, L., & Sofia, K. (2017). *Mapping The Funding Landscape For Biodiversity Conservation In Peru* Master of Science Thesis. University of Illinois at Urbana-Champaign.
- Nelson, A., & Chomitz, K. (2011). Effectiveness of strict vs. multiple use pas in reducing tropical forest fires: A global analysis using matching Methods. *PLOS ONE*. <https://doi.org/10.1371/journal.pone.0022722>.
- Nepstad, D., Alencar, A., Barros, A., Lima, E., Mendonza, E., Azevedo-Ramos, C., et al. (2006). Inhibition of Amazon deforestation and fire by parks and indigenous reserves. *Conservation Biology*, 20, 65–73.
- Nhantumbo, I. (2015). REDD+ and the private sector: Tapping into domestic markets. *IIED Briefing*. International Institute for Environment and Development.
- Ngitiko, M., Sinandei, M., Meitaya, P., & Nelson, F. (2010). Pastoral activists: Negotiating power imbalances in the Tanzanian Serengeti. In F. Nelson (Ed.), *Community rights, conservation and contested land: The politics of natural resource Governance in Africa* (pp. 192–269). London: Earthscan.
- Nolte, C., Arawgwal, A., Silvius, K., & Soares-Filho, B. (2013). *Governance regime and location influence avoided deforestation success of PAs in the Brazilian Amazon*. PNAS Early Edition.
- Norman, M., & Nakhoda, S. (2015). The State of REDD+ Finance. CGD Working Paper 378. Washington, D.C.: Center for Global Development, Updated in 2015, p. 2 and 7.
- Oakland Institute. (2018). An open letter to the Tanzanian Government with regard to its response to the Oakland Institute's Report, Losing the Serengeti, June 6. Retrieved from <https://www.oaklandinstitute.org/open-letter-tanzanian-government-response-losing-serengeti>.
- Orozco-Quintero, A., Burlando, C., & Robinson, L. (2015). Just Conservation? Justice, conservation and the PAs establishment frenzy. November 2. Retrieved from <https://intercontinentalcry.org/just-conservation/>.
- Oviedo, G. (2002). *Lessons learned in the establishment and management of protected areas by indigenous and local communities*. Geneva: World Conservation Union (IUCN). Mimeo.
- Padoch, C. & Piñedo-Vasquez, M. (1996). Smallholder forest management: Looking beyond non-timber products. In M. Ruiz Perez & J. E. M. Arnold (Eds.), op cit.
- Paneque-Gálvez, J., Vargas-Ramírez, N., Napoletano, B., & Cummings, A. (2017). Grassroots innovation using drones for indigenous mapping and monitoring. *Land*, 6(4), 86. <https://doi.org/10.3390/land6040086>.
- Parker, C. (2017). Indigenous community judge shot as colonial violence terrorizes Nicaragua. *Intercontinental Cry* 17 Oct. Retrieved from <https://intercontinentalcry.org/indigenous-community-judge-shot-dead-colonial-violence-terrorizes-nicaragua/>.
- Pyhälä, A., Orozco, O., & Counsell, S. (2016). *Protected Areas in the Congo Basin: Failing Both People and Biodiversity* (p. 86). London: Rainforest Foundation-UK. <https://doi.org/10.3390/land6040086>.

- Poirier, R., & Ostergren, D. (2002). Evicting people from nature: Indigenous rights and national parks in Australia, Russia and the United States. *Natural Resources Journal*, 42, 331–351.
- Pretty, J., Adams, W., Berkes, F., Ferreira de Athayde, S., Dudley, N., Hunn, E., et al. (2009). The intersections of biological diversity and cultural diversity: Towards integration. *Conservation and Society*, 7(2), 100–112.
- Rai, N., & Madegowda, C. (2018). The social and ecological impacts of conservation policy: The case of Biligiri Rangaswamy temple tiger reserve, India case study for cornered by protected areas. Retrieved from <http://www.corneredbyPAs.com/India>.
- RAISG (Amazonian Network of Georeferenced Socio-Environmental Information). (2009). Amazonian Indigenous Peoples territories and their forests related to climate change: Analyses and policy options. Retrieved from <https://www.amazoniasocioambiental.org/en/maps/#!/areas>.
- Rights and Resources Initiative. (2014). What future for reform? Progress and slowdown in forest tenure reform since 2002. Washington DC.
- Rights and Resources Initiative. (2015). Who owns the world's land. A global baseline of formally recognized indigenous and community land rights. Washington, DC. Retrieved from <https://rightsandresources.org/en/publication/whooownsthehand/-XAAjydrfOQ>.
- Rights and Resources Initiative. (2018). At a crossroads. Consequential trends in recognition of community based forest tenure from 2002 to 2017. Washington, DC. Retrieved from <https://rightsandresources.org/en/publication/at-a-crossroads-trends-in-recognition-of-community-based-forest-tenure-from-2002-2017/-XAAilCdRfOQ>.
- Romaine, S., & Gorenflo, L. (2017). Linguistic diversity of natural UNESCO World Heritage sites: Bridging the gap between nature and culture. *Biodiversity Conservation*, 26, 1973–1988.
- Salafsky, N., Cauley, N., Balachander, G., Cordes, B., Parks, J., Margoluis, C., et al. (2001). A systematic test of an enterprise strategy for community-based biodiversity conservation. *Conservation Biology*, 15(December), 1585–1595.
- Sayer, J., Elliott, C., Barrow, E., Gretzinger, S., Maginnis, S., McShane, T., Shepherd, G. (2004). The implications for biodiversity conservation of decentralized forest resources management. Paper prepared on behalf of World Conservation Union (IUCN) and World Wildlife Fund (WWF) for the United Nations Forum on Forests (UNFF) inter-sessional workshop on decentralization. Interlaken, Switzerland: UNFF.
- Scott, J. (2017). *Against the Grain: A deep history of the earliest states*. New Haven: Yale University Press.
- Seymour, F. (2008). Conservation, displacement, and compensation. In M. Cernea & M. Mathur (Eds.), *Compensation in resettlement* (pp. 2008). Delhi: Oxford University Press.
- Sheppard, D. (2003). The Vth IUCN World Parks Congress Editorial. *Parks*, 14(2), 1–5.
- Short, D. (2006). Reconciliation and the problem of internal colonialism. *Journal of Inter-cultural Studies*, 26(3), 267–282. <https://doi.org/10.1080/07256860500153534>.
- Schleicher, J., Zaehring, J. G., Vira, B., Visconti, P., & Sandbrook, C. (2019). Protecting half of the planet could directly affect over one billion people. Nature Sustainability: Brief Communication. <https://doi.org/10.1038/s41893-019-0423-y>.
- Sobrevila, C. (2008). The role of indigenous peoples in biodiversity conservation. The natural but often forgotten partners. *World Bank*, 9–10.
- Springer, J., & Almeida, F. (2015). Protected Areas and the Land Rights of IPLCs. Washington, DC: Rights and Resources Initiative.
- Springer, J. (2015). *IUCN's rights-based approach: A systematization of the unions policy instruments, standards and guidelines*. Gland: IUCN.
- Stevens, C., Winterbottom, R., Springer, J., & Reyntar, K. (2014). *Securing rights, combating climate change: How strengthening community forest rights mitigates climate change*. Washington, DC: World Resources Institute.
- Stevens, S. (Ed.). (2014). Indigenous peoples, national parks, and PAs: A new paradigm linking conservation, culture, and rights. Tucson: University of Arizona Press.
- Stevens, S., Pathak Broome, N., & Jaeger, T. (2016). Recognizing and Respecting ICCAs overlapped by Protected Areas: a report to the ICCA Consortium. Retrieved from [www.iccaconsortium.org/wp-content/uploads/2016/11/publication-Recognising-and-Respecting-ICCAs-Overlapped-by-PAs-Stevens-et-al-2016-en.pdf](http://www.iccaconsortium.org/wp-content/uploads/2016/11/publication-Recognising-and-Respecting-ICCAs-Overlapped-by-PAs-Stevens-et-al-2016-en.pdf).
- Strelneck, D., & Vilela, T. (2017). *International conservation funding in the Amazon: An updated analysis*. Palo Alto, USA: Gordon and Betty Moore Foundation.
- Swift, J. (2018). Charles lane, barabaig life, love and death in Tanzania's Hanang plains. *Nomadic Peoples*, 22, 183–185.
- Tagliarino, N. (2017). Avoiding the worst-case scenario, whether IPLCs in Asia are vulnerable to expropriation without fair compensation. Paper presented at the World Bank Conference on Land and Poverty, March 20–24, 2017.
- Tauli-Corpuz, V. (2015). Expert Testimony before the Inter-American Court of Human Rights on the Case of Kaliña and Lokono Peoples vs. the Government of Surinam. Retrieved from <http://unsr.vtaulicorpuz.org/site/index.php/en/statements/56-testimony-case->
- Tebtebba Foundation (2010). *Indigenous peoples, forests & REDD plus: State of the forests, policy environment & ways forward*. Baguio City, Philippines: Tebtebba Foundation.
- The Munden Project. (2017). *Communities as Counterparties: Preliminary Review of Concessions and Conflict in Emerging and Frontier Market Concessions*. Washington, D.C.: Rights and Resources Initiative [http://rightsandresources.org/wp-content/uploads/Communities-as-Counterparties-FINAL\\_Oct-21.pdf](http://rightsandresources.org/wp-content/uploads/Communities-as-Counterparties-FINAL_Oct-21.pdf).
- Truth and Reconciliation Commission of Canada. (2015). What we have learned: Principles of Truth and Reconciliation. Ottawa, Ontario. Retrieved from [http://www.trc.ca/websites/trcinstitution/File/2015/Findings/Principles of Truth and Reconciliation.pdf](http://www.trc.ca/websites/trcinstitution/File/2015/Findings/Principles%20of%20Truth%20and%20Reconciliation.pdf).
- United Nations (2016). Report of the Special Rapporteur of the Human Rights Council on the rights of indigenous peoples. *Victoria Tauli-Corpuz. A771/229. Geneva: United Nations*.
- UNEP (2003). Protected Areas Report of the liaison group meeting on the outcome of the World Parks Congress, UNEP/CBD/SBSTTA/9/INF/22.
- UNEP-WCMC, IUCN and NGS. (2018). *Protected Planet Report 2018*. : Cambridge UK; Gland, Switzerland; and Washington, D.C., USA. Cambridge UK; Gland, Switzerland; and Washington, D.C., USA.: UNEP-WCMC.
- UNOHCHR (2018). Indigenous rights must be respected during Kenya climate change project say United Nations experts. *UNOHCHR*.
- US Agency for International Development (USAID). (2012). Tenure and indigenous Peoples: the importance of self-determination, territory, and rights to land and other natural resources. Author: Janis Alcorn. USAID Property Rights and Resource Governance Project. Washington, DC: USAID.
- Venter, O., Fuller, R., Segan, D., Carwardine, J., Brooks, T., Burchart, S., et al. (2014). Targeting global protected area expansion for imperiled biodiversity. *PLoS Biology*, 12(6), e1001891. <https://doi.org/10.1371/journal.pbio.1001891>.
- Vidal, J. (2014). How the Kalahari bushmen and other tribespeople are being evicted to make way for wilderness. *The Guardian* 15 Nov.
- Vidal, J. (2016). The tribes paying the brutal price for conservation. *The Guardian* 28 Aug. <https://www.theguardian.com/global-development/2016/aug/28/exiles-human-cost-of-conservation-indigenous-peoples-eco-tMarkourism>
- Wahono, F., Pili, M., Masium, S., Say, S., Giring, R., Yas, Y., et al. (2012). *Pancur Kasih empowerment movement*. Baguio City, Philippines: Tebtebba Foundation.
- Waldron, A., Mooers, A., Miller, D., Nibbelink, N., Redding, D., Kuhn, T., et al. (2013). Targeting global conservation funding to limit immediate biodiversity declines. *PNAS*, 110(29), 12144–12148.
- Walker, W., Baccini, A., Schwartzman, S., Ríos, S., Oliveira-Miranda, M., Augusto, C., et al. (2014). Forest carbon in Amazonia: The unrecognized contribution of indigenous territories and protected natural areas. *Carbon Management*, 5(5–6), 479–485. <https://doi.org/10.1080/17583004.2014.990680>.
- Walsh, E. (2016). Protected is not conserved: the implementation gap in international conservation policy. *Intercontinental Cry*, July 25. <https://intercontinentalcry.org/protected-not-conserved>; 80
- Wilson, E. (2016). *Half-Earth: Our Planet's Fight for Life*. New York and London: Livewright Publishing Corporation.
- Wilson, M. (2015). Reflections on reconciliation. *First Peoples Child and Family Review*, 10, 2.
- Witter, R., & Satterfield, T. (2014). Invisible losses and the logics of resettlement compensation. *Conservation Biology*, 00, 1–9.
- Witter, R., & Satterfield, T. (2018). The Ebb and flow of indigenous rights recognitions in conservation policy. *Development and Change*, 1–26. <https://doi.org/10.1111/dech.12456>.
- Wolosin, M., et al. (2016). The Geography of REDD+ Finance: Deforestation, Emissions and The Targeting of Forest Climate Finance. Washington, DC: Forest Trends. <https://www.forest-trends.org/wp-content/uploads/imported/redx-report-2016-final-pdf.pdf>.
- Wycoff-Baird, B., Klaus, A., Christen, C., & Keek, M. (2001). *Shifting the power. Decentralization and biodiversity conservation. Biodiversity Support Program (100)* Washington, D.C.: World Resources Institute and The Nature Conservancy.
- Ybarra, M. (2016). "Blind passes" and the production of green security through violence on the Guatemalan border. *Geoforum*, 69, 194–206.
- Ybarra, M. (2017). Green Wars: Narco Narratives and Indigenous Q'eqchi Self Determination. University of California Press. December 2017.
- Yin, S. (2017). For indigenous communities, the fight against climate change is a fight for human rights. *Earther*, December 6. <https://earther.com/for-indigenous-communities-the-fight-against-climate-c-1820973253>.
- Zurba, M., Beazley, K., English, E., & Buchmann-Duck, J. (2019). Indigenous protected and conserved areas (IPCAs), aichi target 11 and Canada's Pathway to Target 1: Focusing conservation on reconciliation. *Land*, 8(1), 10. <https://doi.org/10.3390/land8010010>.