

CONSERVATION GERRYMANDERING

*Avery E. Emery**

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ABSTRACT

In 2022, in response to degrading habitats and species extinction caused by human activities, the international community pledged to protect 30% of Earth’s land and waters by 2030. On its face, this pledge is intuitive; human activity is destroying the land and polluting the water, so the “natural” must be protected from the “human.” But this conservation model is flawed. The underlying premise—gerrymander nature into its own discreet areas to save it from humanity—erases millennia of Indigenous practices that shaped and reshaped our environment. The forced relocation of Indigenous groups from their lands threatens the biodiversity of the areas that NGOs and nation-states seek to protect. More importantly, this expulsion is a human rights violation. Protecting 30% of the planet within six years without rethinking old conservation strategies would lead to unimaginable human suffering. This Comment blends biodiversity literature that is increasingly critical of 19th and 20th century conservation practices with a discussion of these methods as a modern form of colonialism. In doing so, it advocates for a new vision of conservation that centers sovereignty of Indigenous peoples and the wisdom of their practices: Indigenous Protected and Conserved Areas.

INTRODUCTION

Human activities including agriculture, overfishing, and mining have wiped out roughly 20% of the biodiversity in many of the planet's large habitats.¹ At the same time, species like the Bengal tiger face extinction because they cannot adapt to a changing climate and the resulting loss of the ecological niche they evolved to inhabit.² While the mass extinction of so many species is itself unconscionable, this loss will exacerbate the effects of human-caused climate change worldwide. For example, each additional acre of deforestation in the Amazon will lead to a corresponding decrease in biodiversity. Likewise, deforestation will decrease the world's largest forest's ability to capture carbon dioxide from the atmosphere, thus aggravating the climate crisis.

In response to this biodiversity crisis, the international community agreed in late 2022 to conserve 30% of the world's land and water by 2030.³ This goal of "30x30" falls short of the goal set by the biologist E.O. Wilson. Wilson's 2016 book "Half-Earth" called for half of the planet's land and water to be set aside and conserved to protect it from humans. Wilson explained this ambitious goal by invoking the practice of gerrymandering—drawing voting district boundaries in contorted shapes to strengthen the electoral power of one political party or racial group over another—as a "fruitful technique."⁴ One of the common tactics of gerrymanderers is to "pack" as many of their opponents into one district as possible, limiting their ability to win elections in other districts. Rather than packing supporters of a party or members of a particular racial group into a district, these "conservation gerrymanderers" seek to pack nature into reserves.

Despite good intentions, these conservation goals have been met with alarm from some Indigenous peoples and their allies as potential harbingers

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1. Brad Plumer, *Humans Are Speeding Extinction and Altering the Natural World at an 'Unprecedented' Pace*, N.Y. TIMES (May 6, 2019), <https://www.nytimes.com/2019/05/06/climate/humans-are-speeding-extinction-and-altering-the-natural-world-at-an-unprecedented-pace.html>.

2. *Id.*

3. Justine Calma, *Nearly Every Country on Earth Just Agreed to Protect 30 Percent of the Planet*, THE VERGE (Dec. 19, 2022), <https://www.theverge.com/2022/12/19/23516592/united-nations-biodiversity-conference-framework-protected-areas-30>.

4. Kara Manke, *Naturalist E.O. Wilson on the Fight to Save Half the Planet for Wildlife*, BERKELEY NEWS (Oct. 3, 2019), <https://news.berkeley.edu/2019/10/03/naturalist-e-o-wilson-on-the-fight-to-save-half-the-planet-for-wildlife>.

of human rights abuses.⁵ Achieving the 30x30 goal requires scaling up the number of areas protected; as of 2021, conserved areas encompass roughly 17% of land and inland water ecosystems and less than 8% of coastal ecosystems and the ocean.⁶ Governments achieved previous conservation goals through forcibly relocating the people who inhabited and stewarded the land for generations.⁷ Using the same strategies to achieve the 30x30 goal would mean mass displacement of Indigenous peoples worldwide. But Indigenous leadership and knowledge are critical to effective conservation.⁸

This article neither rejects the importance of conservation nor advocates for a “new conservation” framework primarily concerned with continued economic development.⁹ Instead, it advocates for a new conservation framework that prioritizes the human rights, sovereignty, and traditional practices of Indigenous peoples as the most effective way to promote biodiversity. This article begins by introducing a model of conservation that this article calls conservation gerrymandering, and the critiques of this model’s ability to foster biodiversity. Following this discussion, the article calls attention to the human rights abuses Indigenous peoples have suffered in the name of conservation. The article concludes by calling for the adoption of Indigenous Protected and Conserved Areas—a conservation framework founded upon respect for Indigenous peoples and the knowledge that they embody.

I. THE BIODIVERSITY PROBLEMS WITH CONSERVATION GERRYMANDERING

The United States developed what has become the most common conservation model worldwide, best exemplified by the National Park

5. *Biodiversity: Plan to Declare 30% of the World Protected Areas by 2030 Must Place Indigenous Peoples’ Rights at Its Heart*, AMNESTY INT’L (Dec. 6, 2022), <https://www.amnesty.org/en/latest/news/2022/12/biodiversity-plan-to-declare-30-of-the-world-protected-areas-by-2030-must-place-indigenous-peoples-rights-at-its-heart/>.

6. *World Met Target for Protected Area Coverage on Land, but Quality Must Improve*, IUCN (May 19, 2021), <https://iucn.org/news/protected-areas/202105/world-met-target-protected-area-coverage-land-quality-must-improve>.

7. Chris Aadland, *How Tribes Are Reclaiming and Protecting Their Ancestral Lands From Coast to Coast*, AUDOBON MAG., <https://www.audubon.org/magazine/winter-2022/how-tribes-are-reclaiming-and-protecting-their> (last visited Oct. 23, 2024).

8. Alvaro Fernández-Llamazares et al., *A Baseless Statistic Could Harm the Indigenous People it is Meant to Support*, 633 NATURE 32, 35 (2024) (“The global conservation community must . . . acknowledge more comprehensively the crucial roles of Indigenous Peoples in biodiversity conservation, restoration and stewardship.”).

9. See Michelle Marvier et al., *Conservation in the Anthropocene: Beyond Solitude and Fragility*, BREAKTHROUGH INST. (Feb. 1, 2012), <https://thebreakthrough.org/journal/issue-2/conservation-in-the-anthropocene> (introducing “new conservation” and defining it as “seek[ing] to enhance those natural systems that benefit the widest number of people, especially the poor”).

System.¹⁰ This model preserves “wilderness” in protected areas (PAs), so that human development and interactions never threaten their pristine biodiversity.¹¹ In 1864, the law that made Yosemite a public trust stated that PAs are “for resort and recreation . . . to be left inalienable for all time.”¹² The lands worthy of this protection are typically those perceived to be wild, untouched by mankind. The United States, for example, defines “wilderness” in strict opposition to people. Wilderness is “an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain.”¹³ PAs are therefore seen as allowing native species to exist and thrive as they would without human interaction.¹⁴

This framework is still the preferred model among conservationists, with some seeking to go even further with “a new wave of strictly enforced nature protection.”¹⁵ Implicit in this view of conservation are certain assumptions “the moral imperative of nature protection . . . the mythical status of harmonious, ecologically friendly local people . . . [and] the immediate need for strictly enforced protection measures.”¹⁶ The first of these assumptions is that nature has the intrinsic right to exist and communities—both present and future—have a right to share in its aesthetic beauty.¹⁷ The second assumption challenges the increasingly common view that Indigenous peoples are “natural conservationists.”¹⁸ For example, one author, stated that “wherever people have had the tools, techniques, and opportunities to exploit natural

10. Joseph Lee, *How the World’s Favorite Conservation Model was Built on Colonial Violence*, GRIST (Apr. 13, 2023), <https://grist.org/indigenous/30x30-world-conservation-model-colonialism-indigenous-peop/>.

11. Peter R. Wilshusen et al., *Reinventing a Square Wheel: Critique of a Resurgent “Protection Paradigm” in International Biodiversity Conservation*, 15 SOC’Y & NAT. RES. 17, 18 (2002) (“[L]oss of species continues to occur at an alarming pace as a result of human activities... Given this situation, many conservation biologists view national parks and other protected areas as the last safe havens for large tracts of tropical eco-systems.”).

12. MARK DOWIE, CONSERVATION REFUGEES: THE HUNDRED-YEAR CONFLICT BETWEEN GLOBAL CONSERVATION AND NATIVE PEOPLES 5 (2011).

13. 16 U.S.C. § 1131(e).

14. Wilshusen et al., *supra* note 11, at 22–24.

15. *Id.* at 18.

16. *Id.* at 22.

17. *Id.* at 24.

18. *Id.* at 32. Wilshusen and his coauthors note “that [while] much of the conservation literature does tend to glorify Indigenous peoples[,]” conservation gerrymanderers can “overgeneralize in the opposite direction.” *Id.* at 31–32. Authors challenging the common view that Indigenous peoples are “natural conservationists” often note that rapid social changes have forced some Indigenous groups to abandon the “qualities that historically allowed them to live in relative harmony with nature compared to modern societies[.]” *Id.* at 31. At the same time, this view fails to recognize that traditional practices can be adapted for sustainability even in a changing world, especially if outside entities provide support. *Id.* at 32. In sum, it is important to acknowledge that Indigenous peoples are not a monolith, and we should not rely on stereotypes when making decisions regarding conservation. At the same time, conservation must make space for the “decision making, organizational, and governance processes—both customary and modern—that structure resource use within and among rural communities.” *Id.*

systems they have done so.”¹⁹ The final assumption rests largely on the first two. If there is a moral requirement to protect nature and no guarantee that Indigenous peoples will engage in sustainable practices, then conservationists themselves are morally justified in stepping in as nature’s protectors.²⁰

The conservation gerrymanderers’ assumptions begin to fall apart when one pulls at the loose thread of how “nature” is defined. The early photographers who captured the stunning beauty of the Yosemite Valley and whose works helped catalyze public support for its protection, for example, intentionally avoided photographing the local Miwok people.²¹ Omitting the Miwok people from the photographs allowed these photographers to erase their contributions to the valley over countless generations. They were not viewed as stewards of the land whose crops, pruning, and periodic burns shaped the landscape. Instead, they were portrayed as mere nomads passing through Yosemite’s “unoccupied virgin wilderness.”²²

The United States’ very definition of wilderness codified this misconception of Indigenous peoples as “mere nomads.” Thus, the government erased Indigenous peoples from the histories of areas like Yosemite, the Grand Canyon,²³ and Yellowstone.²⁴ This whitewashing of Indigenous contributions to these landscapes allows the United States to claim that the areas “where the earth and its community of life are untrammelled by man.”²⁵ This lie, sometimes called “the myth of the pristine environment,” is at work all over the world, obfuscating the contributions of Indigenous peoples in shaping the so-called “natural” world.²⁶ For example,

19. Wilshusen et al., *supra* note 11, at 31 (quoting JOHN OATES, MYTH AND REALITY IN THE RAIN FOREST 55 (1999)).

20. *Id.* at 32 (“Their arguments seem to imply that since all ‘traditional’ peoples (whomever they may be) are not the ‘natural conservationists’ they are made out to be, then conservationists should abandon feel-good, bottom-up approaches and get back to the business of nature protection.”).

21. DOWIE, *supra* note 12, at 16.

22. *Id.* at 8.

23. See Jeremy Hobson, ‘Guardians of the Grand Canyon’: The Havasupai Tribe’s Long Connection to The Canyon’s Red Rocks, WBUR (Aug. 13, 2019), <https://www.wbur.org/hereandnow/2019/08/13/grand-canyon-havasupai-tribe> (noting “[The Havasupai Tribe] decided to stay even through the long history of struggle with the national park and then trying to push us out of the area. They persevered, and they actually still live inside the national park today.”).

24. Richard Grant, *The Lost History of Yellowstone*, SMITHSONIAN MAG. (Jan. 2021), <https://www.smithsonianmag.com/history/lost-history-yellowstone-180976518/> (“The big myth about Yellowstone is that it’s a pristine wilderness untouched by humanity... Native Americans were hunting and gathering here for at least 11,000 years.”) (internal quotation marks omitted).

25. 16 U.S.C. § 1131(e).

26. Clark L. Erickson, *Amazonia: The Historical Ecology of a Domesticated Landscape*, in THE SOCIAL LIVES OF FORESTS: PAST, PRESENT, AND FUTURE OF WOODLAND RESURGENCE 199, 200 (Susanna B. Hecht et al. eds., 2014); Erle C. Ellis et al., *People Have Shaped Most of Terrestrial Nature for at Least 12,000 Years*, 118 PNAS 1, 7 (2021) (first noting depictions of the “natural world” are incorrect; and then noting “[O]nly about 17% of Earth’s land was without evidence of prior human

this erases 11,000 years of Indigenous efforts “involving transplanting of plants and animals, selective culling of noneconomic species and encouragement of useful species, burning, settlement, farming, agroforestry . . . and other activities,” which built the Amazon we know today.²⁷

So, when conservation gerrymanderers advocate for protection of “nature,” they are often referring to an imagined vision of nature where people have never cast a shadow. To protect this nature, humans, including the Indigenous peoples who live in the area, must necessarily be excluded from the landscape. But this exclusion threatens the very biodiversity that the conservationists seek to protect, because Indigenous peoples are the ones best equipped to protect Earth’s biodiversity.

One recent study, for instance, found that “some of the highest quality forest lands worldwide” are on Indigenous peoples’ lands.²⁸ The study went on that “[i]t follows that Indigenous peoples are stewards of a substantial proportion of Earth’s biodiversity.”²⁹ Likewise, another study highlighted that “[a]reas under Indigenous management today are recognized as some of the most biodiverse areas remaining on the planet.”³⁰ The same study found that “[t]he primary cause of declining biodiversity, at least in recent times, is the appropriation, colonization, and intensifying use of lands already inhabited, used, and reshaped by current and prior societies.”³¹ Finally, a third study observed that many Indigenous institutions for managing the land have proven to be “remarkably persistent and resilient, suggesting that such governance forms can shape sustainable human-landscape relationships in many places.”³²

Some of the biodiverse Indigenous lands have received formal protection, while others are simply managed in sustainable ways by Indigenous peoples adhering to the beliefs and practices of those who came before them.³³ Central to many Indigenous cultures is the recognition that humans are not separate from nature.³⁴ There is an understanding “that if we

habitation or use over the past 12,000 y[ears]. Yet, even this low percentage is certainly an overestimate[.]”).

27. Erickson, *supra* note 26, at 199–200.

28. Christopher J. O’Byrne et al., *The Importance of Indigenous Peoples’ Lands for the Conservation of Terrestrial Mammals*, 35 *Conservation Biology* 1002, 1006 (2021).

29. *Id.*

30. Ellis et al., *supra* note 26, at 7.

31. *Id.*

32. Stephen T. Garnett et al., *A Spatial Overview of the Global Importance of Indigenous Lands for Conservation*, 1 *Nature Sustainability* 369, 370 (2018).

33. Steve Nitah, *Indigenous Peoples Proven to Sustain Biodiversity and Address Climate Change: Now It’s Time to Recognize and Support This Leadership*, 4 *ONE EARTH* 907, 907 (2021); See also Garnett et al., *supra* note 32, at 370 (noting that roughly 20% of Indigenous lands are located in PAs, representing roughly 40% of the PAs worldwide).

34. Nitah, *supra* note 33, at 907.

take care of the land, the land will take care of us.”³⁵ This understanding prompts Indigenous communities worldwide to invest “their limited resources on conservation efforts [which are] achieving outcomes that are at least equivalent to those of government-funded protected areas.”³⁶

Indigenous-led conservation stands in stark contrast to the conservation gerrymanderers’ assumption that Indigenous peoples are not “natural conservationists.”³⁷ This perception stems, again, from the conservation gerrymanderers’ definition of nature as an area without people. When the historic contributions of Indigenous peoples were erased, all that was left were the “natural” processes, such as tectonic plate movement, evolution, and storms. Under the gerrymandering model of conservation, these are the only processes that should be impacting PAs today. Because Indigenous conservation practices do not fit the conservation gerrymanderers’ definition of natural, the practices cannot be true conservation.

These conservationists fail to recognize that using the land, or even changing the landscape, does not necessarily lead to biodiversity loss. In fact, disregarding Indigenous stewardship practices can actually threaten biodiversity. Take, for instance, fires in the Western United States. Fire is an incredibly important process for “restoring nutrients to the soil, clearing decaying brush, and helping plants germinate.”³⁸ For thousands of years, Native Americans utilized controlled burns across the United States, until European colonizers drove them from the land and suppressed the practice, often violently.³⁹ As the dead underbrush accumulated in the forests of the American West and droughts became more common and more severe, unintentional fires became more violent and more uncontrollable.⁴⁰ The controlled fires helped to reduce the overall number of trees, thus allowing each tree to have more water and become more fire resistant.⁴¹ Suppressing controlled burns allowed more trees to grow, increasing the likelihood of “massive blazes that can wipe out almost all of the living trees in an area”⁴² At the same time, suppressing burns enabled invasive species to overcome native plants, thereby reducing biodiversity.⁴³

But even small practices can have big impacts for the biodiversity of a given species. Robin Wall Kimmerer, an enrolled member of the Citizen

35. Nitah, *supra* note 33, at 907.

36. VICTORIA TAULI-CORPUZ ET AL., CORNERED BY PROTECTED AREAS 4 (2018).

37. Wilshusen et al., *supra* note 11, at 31–32.

38. Umair Irfan, *We Must Burn the West to Save It*, VOX (July 13, 2021),

<https://www.vox.com/21507802/wildfire-2020-california-indigenous-native-american-indian-controlled-burn-fire>.

39. *Id.*

40. *Id.*

41. *Id.*

42. *Id.*

43. Irfan, *supra* note 38.

Potawatomi Nation and plant ecologist, discusses this in her book “Braiding Sweetgrass.” Several Indigenous women asked Kimmerer to do a study about which method of harvesting sweetgrass was better for the health of the sweetgrass patches.⁴⁴ The women disagreed about whether to take just the leaves and leave the roots or harvest the entire plant.⁴⁵ Based on conventional wisdom, the University denied funding to Kimmerer’s graduate student, Laurie, for the sweetgrass experiment. The scientific community believed that harvesting a plant would obviously be deleterious for its population no matter how it was harvested.⁴⁶ Undeterred, Laurie performed the study.⁴⁷ At the end of the study, plants in the unharvested plots were smothered by dead stems, while both of the harvested plots teemed with growth.⁴⁸ Contrary to the conventional scientific wisdom, “it didn’t seem to matter how the grass was harvested, only that it was.”⁴⁹

Conservation methods that do not integrate the teachings and practices of Indigenous peoples will threaten the very biodiversity that they seek to protect. These conservation methods create a divide between “human” and “natural” processes that is contrary to most of history. But there are other ecological concerns and limitations associated with the conservation gerrymandering method as it has historically been practiced. One limitation is that creating PAs surrounding rivers (which the 30x30 goal seeks to do) may not be effective. Biodiversity loss in these riparian environments often stems “from extra-local factors like modification of river flow due to dams, boat traffic and urbanization-induced pollution” that all occur upstream of the PA.⁵⁰ Additionally, deforestation outside of the PA is the only way to relocate individuals currently living within the PA.⁵¹ Furthermore, when Indigenous land stewards are no longer caring for the land, invasive species can emerge absent “[l]ong-term ecological management and sustained funding”⁵²

Another concern stems from how PAs are created. E.O. Wilson believed that one potential technique would be akin to gerrymandering. In his view, conservationists could “take a piece here and a sliver there, and then a little round area over here, and you put them together into a national reserve or

44. ROBIN WALL KIMMERER, BRAIDING SWEETGRASS: INDIGENOUS WISDOM, SCIENTIFIC KNOWLEDGE, AND THE TEACHINGS OF PLANTS 152–53 (2013).

45. *Id.*

46. *Id.* at 155–56.

47. *Id.* at 156–57.

48. *Id.* at 158.

49. KIMMERER, *supra* note 44, at 159.

50. Asmita Kabra, *Ecological Critiques of Exclusionary Conservation*, 2 *ECOLOGY, ECON., & SOC’Y – THE INSEE J.* 9, 16 (2019).

51. *Id.* at 17.

52. *Id.*

protected area.”⁵³ Often this is the technique used by the United States to preserve areas as National Parks. Historically, there is a bias toward protecting only those areas that are “nationally significant,” which is often interpreted to mean rare landscapes or visually stunning scenic areas.⁵⁴ Figure 1 demonstrates some of the contorted shapes of National Parks in the United States.

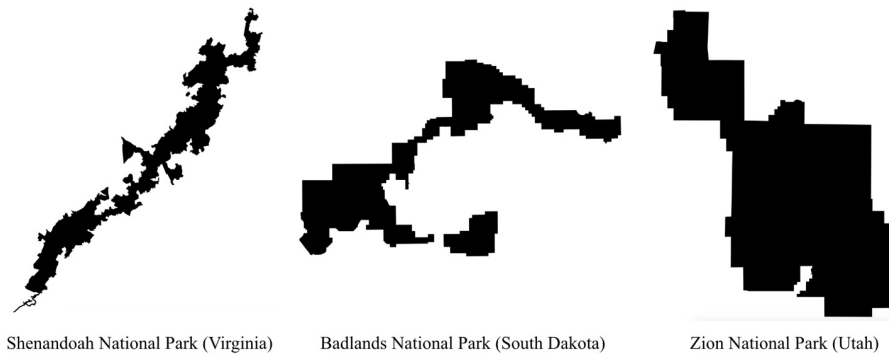


Figure 1: contorted outlines of various U.S. National Parks

The problem with this approach is that the contorted shapes with many edges exposes more of the perimeter of the PA to unprotected areas, impacting biodiversity.⁵⁵ The areas on the edge of the PA are “more vulnerable to current and future anthropogenic stressors,” which can affect which species are present.⁵⁶ This impacts the entire PA because “stressors at the edges strongly condition interior environments.”⁵⁷ Increasing urbanization and other land use changes in the areas surrounding PAs magnifies these impacts and further isolates the PAs from other habitats.⁵⁸ As PAs become more isolated, it becomes “harder for existing populations

53. Manke, *supra* note 4.

54. LAURA B. COMAY, CONG. RSCH. SERV., RS20158, NATIONAL PARK SYSTEM: ESTABLISHING NEW UNITS 2 (2022). Congress does have the authority to protect areas that are not just visually stunning, but also those that are culturally significant. *Id.* at 3. Critically, similar biases exist in the protection of cultural resources. For a cultural resource to be protected it must be nationally significant and “one of the most important examples of [that] type of resource[.]” *Id.* See also Paul R. Elsen et al., *Keeping Pace with Climate Change in Global Terrestrial Protected Areas*, 6 SCI. ADVANCES 1, 3 (2020) (noting a global bias toward protection of rare climates).

55. Santiago A. Schauman et al., *The Geometry of Global Protected Lands*, 7 NATURE SUSTAINABILITY 82, 82 (2024).

56. *Id.*

57. *Id.* at 84.

58. Juliet Lamb, *National Parks Are Like Islands for Wildlife*, JSTOR Daily (Apr. 14, 2016), <https://daily.jstor.org/national-parks-are-like-islands-for-wildlife/>.

to sustain themselves, or for new populations to establish themselves.”⁵⁹ Isolation causes the extinction rate in many PAs to outpace the rate of new species arriving in the PA. This leads to an overall decrease in biodiversity, especially in small PAs.⁶⁰ The isolation of many PAs and their contorted shapes can therefore threaten the original goal of establishing PAs.⁶¹

But the problems with conservation gerrymandering extend far beyond its failure to foster biodiversity. Forced exclusion and human rights abuses against Indigenous peoples frequently accompany the creation of PAs. Government protection of Yosemite Valley in the United States—whose protection inspired PAs worldwide—exemplifies this pattern.⁶² As the federal government exported its vision for protected, pristine landscapes all over the world, atrocities were being committed in its name. The following section surveys the history of human rights abuses against Indigenous peoples during PA formation, and contextualizes this violence in the broader history of settler colonial violence.

II. THE HUMAN RIGHTS TOLL OF CONSERVATION GERRYMANDERING

Settler colonialism is the process by which an outside group seeks to dominate an area that is currently inhabited by another. Often, the group already inhabiting the area “derive[s] economic vitality, cultural flourishing, and political self-determination from the relationships they have established with the plants, animals, physical entities, and ecosystem of those places.”⁶³ Inherent in settler colonialism is the settlers’ desire to destroy the Indigenous way of life and install their own.⁶⁴ For the settler, two of the most important steps in this process are creating their own ecology, and destroying Indigenous ecologies. This weakens Indigenous self-reliance and makes the settlers’ domination easier.⁶⁵

Examples of these two steps of the settler colonial process abound. One such example is the mass slaughter of the American bison, by which American colonists forced Native Americans off the Great Plains through control of food resources.⁶⁶ In an examples from the last 60 years, Israeli

59. Lamb, *supra* note 58.

60. *Id.*

61. Schauman et al., *supra* note 55, at 84.

62. Lee, *supra* note 10.

63. Kyle Whyte, *Settler Colonialism, Ecology, and Environmental Injustice*, 9 ENV’T & SOC’Y 125, 134–35 (2018).

64. *Id.* at 135 (“[S]ettlers are literally seeking to erase Indigenous economies, cultures, and political organizations for the sake of establishing their own.”).

65. *Id.*

66. J. Weston Phippen, ‘Kill Every Buffalo You Can! Every Buffalo Dead is an Indian Gone’, THE ATLANTIC (May 13, 2016), <https://www.theatlantic.com/national/archive/2016/05/the-buffalo-killers/482349/>.

authorities and settlers have uprooted 800,000 olive trees to weaken Palestinian economic self-sufficiency.⁶⁷ Actions such as rerouting rivers, deforestation, mining, introducing nonnative species, and draining wetlands have the same effect, whether those who directly engage in these actions intend them to weaken Indigenous peoples or not.⁶⁸ At the end of the day, these actions eradicate Indigenous ways of life to make room for a new settler ecology.

Perpetrators of settler colonial violence often seek to turn the land they steal from Indigenous peoples into an engine for economic growth. Such engines include agriculture, mining, logging, and other extractive practices. Unlike the United States and other settler colonialists, conservation gerrymanderers try to prevent these practices from ever occurring. Conservation gerrymanderers do not hope to occupy the land. Instead, they hope to prevent others from doing so. But conservation gerrymanderers seek to suppress Indigenous ecologies in favor of their own protectionist ecology, just as the United States suppressed Native American ecologies to install its own extractive ecology.

Conservation gerrymanderers justify their behavior with the belief that Indigenous peoples cannot be trusted to act in sustainable ways.⁶⁹ But settlers always invent “moralizing narratives” to justify their actions.⁷⁰ Conservation is the moralizing narrative of the conservation gerrymanderers who seek to control Indigenous lands today, just as cultural superiority was the moralizing narrative for the United States government when forcing Indigenous peoples onto reservations.

Since its inception, the conservation gerrymandering model’s proponents have invoked this moralizing narrative to justify violating the human rights of Indigenous peoples all over the world. In the United States, creating

67. Raja Shehadeh, *The Uprooting of Life in Gaza and the West Bank*, THE NEW YORKER (Oct. 26, 2023), <https://www.newyorker.com/news/daily-comment/the-uprooting-of-life-in-gaza-and-the-west-bank>; See also, Layla Hedroug, *Israel’s Campaign Against Palestinian Olive Trees*, YALE REV. INT’L STUD. (Mar. 11, 2023), <https://yris.yira.org/column/israels-campaign-against-on-palestinian-olive-trees/> (“The destruction and restriction of Palestinian olive trees acts as a method of economic control leveled by Israel.”).

68. Whyte, *supra* note 63, at 135.

69. Wilshusen et al., *supra* note 11, at 22. Critically, even when Indigenous groups do not engage in conservation or sustainable practices (like fossil fuel extraction), that cannot serve as a justification to seize control of their lands, as Indigenous groups “have control over the decisions that shape their energy futures because of their status as sovereign nations.” Daniel Raimi & Alana Davicino, *Securing Energy Sovereignty: A Review of Key Barriers and Opportunities for Energy-Producing Native Nations in the United States*, 107 ENERGY RSCH. & SOC. SCI. 1, 1 (2023). Numerous Indigenous groups in the United States have decided to engage in oil, coal, and natural gas production. *Id.* at 2. Conservationists must respect this decision, as “Indigenous sovereignty is interconnected with self-determination.” June McCue, *New Modalities of Sovereignty: An Indigenous Perspective*, 2 INTERCULTURAL HUM. RTS. L. REV. 19, 25 (2007). Seizing their territories, no matter the purported justification, violates the sovereign rights of Indigenous groups.

70. Whyte, *supra* note 63, at 135.

national parks forced the removal of Indigenous inhabitants.⁷¹ The government expelled thousands of Native Americans from the lands their ancestors stewarded for thousands of years, shaping the very landscape that white Americans now admire as virgin wilderness.⁷² Indigenous peoples who sought to remain on their ancestral lands were often killed, including the slaughter of “three hundred Shoshones in one particularly lethal encounter.”⁷³ American colonialists perpetrated all this violence and bloodshed so that privileged whites could experience the pristine beauty of the Western United States and conservationists could study and protect the biodiversity within the parks’ borders.⁷⁴

Australia, Canada, and New Zealand soon adopted this conservation model. These countries each formed national parks (following the removal of the Indigenous inhabitants of the area) in the latter quarter of the 20th century.⁷⁵ European nations colonizing Africa and Asia also created national parks in their colonies.⁷⁶ The Europeans forcibly removed Indigenous peoples from the land “so colonials could enjoy the aesthetics of wild nature, and in the case of Africa, selectively hunt the game for trophies.”⁷⁷ The former Albert National Park (now the Virunga National Park) in the Belgian Congo is a striking example of this process.⁷⁸ King Albert I of Belgium established the park after he visited the Grand Canyon, Yellowstone, and Yosemite National Parks in 1919.⁷⁹ Like the American national parks, Belgian authorities violently removed thousands of Indigenous people from the land to complete King Albert’s park.⁸⁰

More recently, as the scope of the biodiversity crisis becomes clearer, some conservation gerrymanderers argue that the international community should adopt militarized strategies to protect the land.⁸¹ Advocates of this approach call for “armed forms of conservation,” adopting “counter-insurgency-like strategies,” and employing military technologies to protect the biodiversity within PAs.⁸² Indigenous peoples are often the targets of

71. DOWIE, *supra* note 12, at 11.

72. *Id.* (“[M]any of the parks we now revere were not only cleared of Indians but were also posted ‘Whites Only.’”).

73. *Id.*

74. *Id.* at 12.

75. *Id.* at 11.

76. *Id.*

77. DOWIE, *supra* note 12, at 12.

78. Lee, *supra* note 10.

79. *Id.*

80. *Id.*

81. Rosaleen Duffy et al., *Why We Must Question the Militarisation of Conservation*, 232 *BIOLOGICAL CONSERVATION* 66, 66 (2019).

82. *Id.*

conservation militarization.⁸³ Indigenous Baka peoples in the Democratic Republic of the Congo, for example, “have been beaten, imprisoned, and prevented from using their customary forest by eco-guards hired to protect wildlife.”⁸⁴ The Tanzanian government, after years of attacking, incarcerating, and killing Indigenous Maasai peoples, forcibly removed 70,000 Maasai from the lands their ancestors had lived on in the name of environmental protection.⁸⁵

Indigenous peoples worldwide also face a heightened risk of arrest for adhering to their traditional ways of life.⁸⁶ Canadian federal authorities have targeted and arrested First Nations fishermen for their fishing practices, despite those practices being protected by treaty.⁸⁷ Arrests are often based on trumped-up or altogether contrived charges. For example, the Honduran government arrested and held Berta Cárceres, an Indigenous environmental defender, on fabricated charges before she was murdered in 2016.⁸⁸ The Philippines government went so far as to declare the UN Special Rapporteur on the Rights of Indigenous Peoples, Victoria Tauli-Corpuz, and other Indigenous leaders to be terrorists.⁸⁹

The impact on Indigenous communities worldwide is massive. In just 24 years across 15 countries, 250,000 people have been evicted from their land to make way for the formation of PAs.⁹⁰ Those establishing PAs burned homes and destroyed productive assets.⁹¹ Since the inception of the conservation gerrymandering model, governments have established thousands of PAs on every continent.⁹² In turn, these governments have evicted millions of people “from ancestral homelands in the interest of” a mythologized vision of nature.⁹³

Pursuing the 30x30 goal, let alone E.O. Wilson’s Half-Earth goal, could certainly result in millions, if not billions, of conservation refugees. The following section details an emerging conservation strategy that the international community should adopt. This strategy centers Indigenous peoples’ sovereignty and utilizes the knowledge they possess to maximize the positive impacts of conservation.

83. Sarah Sax, *UN Puts Spotlight on Attacks against Indigenous Land Defenders*, GRIST (Apr. 18, 2024), <https://grist.org/global-indigenous-affairs-desk/un-puts-spotlight-on-attacks-against-indigenous-land-defenders/>.

84. *Id.*

85. *Id.*

86. *Id.*

87. *Id.*

88. Sax, *supra* note 83.

89. *Id.*

90. TAULI-CORPUZ ET AL., *supra* note 36, at 6.

91. *Id.*

92. DOWIE, *supra* note 12, at 13.

93. *Id.*

III. TOWARD MORE EFFECTIVE, INDIGENOUS-CENTERED CONSERVATION

Canada is beginning to experiment with a new paradigm of conservation.⁹⁴ This new model, based upon creating Indigenous-protected and -conserved areas (IPCAs), centers Indigenous knowledge and practices that were historically disrespected and even criminalized.⁹⁵ IPCAs are currently located exclusively in British Columbia and the Northwest Territories of Canada. However, the Canadian government committed itself to the 30x30 goal, which would require doubling the areas currently protected in Canada, creating new opportunities for Indigenous peoples to be leaders in conservation efforts.⁹⁶ The Canadian government pledged “\$100 million over five years [to fund] nature conservation projects led by Indigenous communities.”⁹⁷ So far, the Canadian government has provided over 50 Indigenous communities funding through this program.⁹⁸ As of 2022, Indigenous communities in Canada were “in the process of creating IPCAs that would total nearly 200,000 square miles—larger than the entire state of California.”⁹⁹

The term IPCA is an umbrella term for a variety of protection methods. What IPCAs often share is Indigenous leadership, “a long-term commitment to conservation,” and the “elevat[ion of] Indigenous rights and responsibilities.”¹⁰⁰ The variability of protection practices stems primarily from the understanding that IPCAs are based on the self-determination of Indigenous communities.¹⁰¹ Indigenous governments or nations determine the goals, borders, and methods of conservation within the IPCA and partner with outside governmental agencies or environmental nonprofits to carry out their plan.¹⁰² Ultimately, Indigenous peoples managing a particular IPCA may make conservation decisions on the basis of numerous factors. Potential considerations include the terrain of the land being conserved, the historical practices of the Indigenous peoples within the IPCA, and the current needs of the Indigenous community.

94. Nicolas Mansuy et al., *Indigenous Protected and Conserved Areas (IPCAs): Canada's New Path Forward for Biological and Cultural Conservation and Indigenous Well-Being*, 8 FACETS 1, 1 (2023).

95. *Id.* at 4.

96. *Id.* at 6–8.

97. *Id.* at 8.

98. *Id.*

99. Joseph Lee, *How Indigenous People Are Fighting to Stop 'The Biggest Land Grab in History'*, GRIST (Dec. 7, 2022), <https://grist.org/global-indigenous-affairs-desk/how-indigenous-people-are-fighting-to-stop-the-biggest-land-grab-in-history/>.

100. Parks Canada, *We Rise Together*, by The Indigenous Circle of Experts (2018), publications.gc.ca/pub?id=9.852966&sl=0 at 5 [hereinafter “Parks Canada”].

101. *Id.* at 36.

102. *Id.*

This flexibility enables Indigenous communities to carry out their traditional practices within the IPCA. In IPCAs, unlike in many PAs, Indigenous peoples have “the right to benefit from the bounty of the natural world” without fear of criminalization or harassment.¹⁰³ The only limitation on this is that the practices must be carried out sustainably, as those managing IPCAs are seen as the land stewards for future generations.¹⁰⁴ Of course, what this means in practice is simply codifying “the reciprocal responsibility to care for and respect the land and water” inherent within many Indigenous cultures.¹⁰⁵

While IPCAs represent an emerging trend in conservation, early indicators suggest that they benefit both Indigenous communities and the environment.¹⁰⁶ Indigenous communities can use IPCAs to gain political clout and respect from outside groups.¹⁰⁷ Meanwhile, individuals within the community benefit from increased employment opportunities and greater well-being.¹⁰⁸ Finally, through IPCAs, Indigenous peoples have a new avenue to revitalize traditional cultures and practices.¹⁰⁹ Some of these practices were historically suppressed by the Canadian government, most prominently through the network of residential schools the government operated during the 20th century.¹¹⁰

Additionally, “IPCAs provide[] tangible benefits towards ecological conservation.”¹¹¹ These initiatives promote the protection of various threatened species and their habitats and help to restore native plants.¹¹² The successes of utilizing traditional knowledge in IPCAs also helps facilitate greater respect for these practices from a western conservation science perspective.¹¹³ As Indigenous peoples continue to create IPCAs, there will be even more opportunities for researchers to document their ecological benefits. In turn, these ecological benefits will foster more support for IPCAs.

103. Parks Canada, *supra* note 100.

104. *Id.*

105. *Id.*

106. Tanya C. Tran, Natalie C. Ban, & Jonaki Bhattacharyya, *A Review of Successes, Challenges, and Lessons from Indigenous Protected and Conserved Areas*, 241 *BIOLOGICAL CONSERVATION* 1, 7-8 (2020).

107. *Id.*

108. *Id.* at 8.

109. *Id.*

110. See generally John Barber, *Canada’s Indigenous Schools Policy Was ‘Cultural Genocide’*, *Says Report*, *THE GUARDIAN* (June 2, 2015), <https://www.theguardian.com/world/2015/jun/02/canada-indigenous-schools-cultural-genocide-report> (discussing the lengths taken by the Canadian government to suppress the nation’s aboriginal peoples).

111. Tran et al., *supra* note 106, at 8.

112. *Id.*

113. *Id.* at 7.

CONCLUSION

Throughout conservation history in the United States and abroad, conservationists suppressed Indigenous practices and rights in favor of a mythologized vision of nature without humans. This conservatory impulse has been based upon racism,¹¹⁴ and ironically, threatens to undermine the very goals that conservation gerrymanderers hope to accomplish. Thus, from a practical perspective, IPCAs offer the international and national conservation communities a better way to achieve their goals. But perhaps more importantly, IPCAs offer a path toward reconciliation between Indigenous peoples and the settlers who have sought to destroy their ways of life. In fact, the Truth and Reconciliation Commission investigating the Canadian government's historic violations of Indigenous rights helped drive the recent trend toward IPCA formation.¹¹⁵

It is important to keep in mind that widespread adoption of IPCAs would not be a silver bullet for solving the biodiversity crisis. Conservation's limitations extend beyond who is responsible for PA management. For example, governments must improve regulation of land development and urbanization surrounding IPCAs to prevent species isolation and other stressors on the habitat. Nevertheless, adopting IPCAs would still be a significant positive step. Doing so would help to deconstruct the myth of the pristine environment and the definition of wilderness as a place "where man himself is a visitor who does not remain."¹¹⁶ Simultaneously, implementing IPCAs all over the world would put the resources in the hands of those who are best equipped to protect the planet's remaining biodiversity. As countries seek to live up to their pledge to preserve 30% of their resources by 2030, they should be prepared to support and listen to Indigenous leaders. Well-funded and politically supported IPCAs are the best way to do so.

114. DOWIE, *supra* note 12, at 6.

115. Mansuy et al., *supra* note 94, at 2.

116. 16 U.S.C. § 1131(e).