Edith Brown Weiss as a Pathfinder: Strengthening Property Rights and Community-Based Resource Governance for Indigenous Peoples Worldwide

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Abstract

This paper explores the role of Edith Brown Weiss's scholarship in international environmental law with regard to property rights and resource governance, particularly for Indigenous Peoples.¹ Edith Brown Weiss has helped pioneer creative strategies for governing our increasingly crowded, interconnected landscapes to avoid impending local and global ecological catastrophes. Her path-breaking concept of "Intergenerational Equity" addresses the depletion and degradation of resources and the discriminatory access to resources passed on from previous generations. Her work has strengthened environmental laws and policies while also improving protection of human and indigenous rights.² Professor Brown Weiss's vision is reflected in today's global legal and policy architecture for addressing equity issues surrounding Indigenous Peoples' rights to their resources and the challenges generated by accelerating global environmental change. This paper explores Professor Brown Weiss's

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^{1.} G.A. Res. 61/295, United Nations Declaration on the Rights of Indigenous Peoples, U.N. Doc. A/ RES/61/295 (Sept. 13, 2007), art 2 [hereinafter UNDRIP] ("Indigenous peoples and individuals are free and equal to all other peoples and individuals and have the right to be free from any kind of discrimination, in the exercise of their rights, in particular that based on their indigenous origin or identity.").

^{2.} U.N. Secretary-General, *Intergenerational Solidarity and the Needs of Future Generations*, ¶¶ 12, 22, 24, 28 U.N. Doc. A/68/100 (Aug. 5, 2013), https://perma.cc/2NA8-FN6H (referring to her 1989 work IN FAIRNESS TO FUTURE GENERATIONS: INTERNATIONAL LAW, COMMON PATRIMONY, AND INTERGENERATIONAL EQUITY for the notion that humans are "sojourners on earth and temporary stewards of our resources" and for the concepts of "intergenerational planetary rights" and the "principle of intergenerational equity, that each generation should leave to its successors a planet in at least as good condition as that generation received it").

pathfinding role in the new global architecture critical to our common future. She navigates "a kaleidoscope" of elements working together, locally and globally, to build good governance of Indigenous Peoples' land and resources for our future generations.

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INTRODUCTION

Without concerted and effective action to reverse the course of a carbon-based global economy, our options for climate resilience continue to narrow. Assuming that the global population will continue to increase consistently with the United Nation's estimate of eighty-three million people added each year,³ we move steadily towards more draconian rationing and distribution of limited natural resources. Without changing our development and governance concepts and practice, we can expect increasing conflict, social unrest, pandemics, and warfare

^{3.} World Population Projected to Reach 9.8 Billion in 2050, and 11.2 Billion in 2100, U.N. DEP'T OF ECON. & SOCIAL AFF. (Jun. 21, 2017), https://perma.cc/B9UW-4WP3 ("With roughly 83 million people being added to the world's population every year, the upward trend in population size is expected to continue, even assuming that fertility levels will continue to decline."). *Cf.* Darrell Bricker & John Ibbitson, *What Goes Up: Are Predictions of a Population Crisis Wrong?*, THE GUARDIAN (Jan. 27, 2019), https://perma.cc/3Q7X-G8ND ("But the dissident demographers think this is wrong, primarily because the UN is failing to account for an accelerating decline in fertility as a result of urbanisation. In 2007, for the first time in human history, the majority of people in the world lived in cities. Today, it's 55%. In three decades, it will be two-thirds . . . Religious and familial pressures to settle down and make babies [] recede in the city; friends and co-workers, who are largely indifferent to one another's reproductive choices, become more important. Already, almost two dozen countries are getting smaller every year, from Poland to Cuba to Japan, which lost almost 450,000 people in 2018.").

accompanied by the further rise of populism, authoritarianism and worse. Yet, there is hope.

In her seminal work, *In Fairness to Future Generations: International Law, Common Patrimony and Intergenerational Equity*, Professor Edith Brown Weiss pushes us to regard responsible environmental management as not simply necessitated by the evolving international laws but also as a matter of intra- and intergenerational human rights and moral duties. Within this work, she traces the expansion, integration, and increasing relevance of international environmental law, reaching even the most marginalized of people. Framing each generation as the beneficiaries and trustees of "planetary legacy,"⁴ she unprecedentedly combines "the ethics discourse of intergenerational equity or justice to the practice of environmental conservation" so that conservation practice is considered "within the context of global justice and governance."⁵ Her work thereby stands as a towering example of visionary and holistic scholarship that has recognized the existing gaps in the global policy and legal frameworks and sought solutions in order to sustain our natural environment and cultural knowledge for current and future generations.⁶

Professor Brown Weiss's decades of scholarship have helped highlight Indigenous Peoples as invaluable examples of communities practicing responsible environmental management. In countless cases around the globe, Indigenous Peoples have conserved their environment by interweaving their customary stewardship practices and valuable expertise with their sense of common moral obligation to preserve our environment "in no worse condition than the present generation received it" for the future generation.⁷ The world's remaining regions harboring Indigenous Peoples represent a disproportionately large area of relatively undeveloped forests, waterways, and remote ecosystems, all of which are important, vulnerable elements of our global commons.⁸ Indigenous Peoples

8. See Stephen T. Garnett et al., A Spatial Overview of the Global Importance of Indigenous Lands for Conservation, 1 NATURE SUSTAINABILITY 369, 369 (2018) ("In total, Indigenous Peoples influence

^{4.} See generally Lynda M. Collins, *Revisiting the Doctrine of Intergenerational Equity in Global Environmental Governance*, 30 DALHOUSIE L.J. 79, 84, 87, 93–100 (2010).

^{5.} Elizabeth Dirth, Governance for Future Generations: A Global Review of the Implementation of Intergenerational Equity, 5 (2018) (unpublished MSc. Thesis, Utrecht University). *See also* Collins, *supra* note 4, at 99 ("Brown Weiss explicitly sought both to make a case for extending fairness to future generations and to provide a conceptual vehicle for getting there.").

^{6.} See generally Collins, supra note 4, at 93–100.

^{7.} See generally EDITH BROWN WEISS, IN FAIRNESS TO FUTURE GENERATIONS: INTERNATIONAL LAW, COMMON PATRIMONY, AND INTERGENERATIONAL EQUITY 257–287 (1989) (emphasizing the importance of conserving indigenous people's knowledge of conserving environment so as not to deprive the future generation of such knowledge); *id.* at 39 (stating that each generation "should be entitled to a quality of the planet comparable to the one enjoyed by previous generations."); Vicky Tauli-Corpuz et al., *Cornered by PAs: Adopting Rights-Based Approaches to Enable Cost-Effective Conservation and Climate Action*, 130 WORLD DEV. 1, 1 (2020) ("Globally [Indigenous Peoples] 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.").

purportedly "safeguard up to [eighty percent] of the world's remaining biodiversity."⁹ The land and marine environments managed by Indigenous Peoples and local communities have generally seen less biodiversity loss or avoided alteration compared to non-indigenous managed lands.¹⁰ Such biodiversity preservation is traced back to Indigenous Peoples' tradition of stewardship.¹¹ Indigenous Peoples have long respected intergenerational equity in their agroecosystems, tenure customs, and laws as borne out by centuries and, sometimes, millennia of societal sustainability.¹² They have much to teach us today about respect for future generations as we stare down the barrel of an impending ecological catastrophe, fueled by our largely unrestrained carbon-based economies.¹³

9. Values of Indigenous Peoples Can Be a Key Component of Climate Resilience, U.N. CLIMATE CHANGE NEWS (Sept. 6, 2019), https://perma.cc/H8HF-YHEX; John E. Fa et al., Importance of Indigenous Peoples' Lands for the Conservation of Intact Forest Landscapes, 18 FRONTIERS IN ECOLOGY & THE ENV'T 135, 135 (2020) (" [A]t least 36% of IFLs are within Indigenous Peoples' lands, making these areas crucial to the mitigation action needed to avoid catastrophic climate change.").

10. Media Release: Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating', INTERGOVERNMENTAL SCIENCE-POLICY PLATFORM ON BIODIVERSITY & ECOSYSTEM SERVS. (May 2019), https://perma.cc/9GZG-6K33 ("Three-quarters of the land-based environment and about 66% of the marine environment have been significantly altered by human actions. On average these trends have been less severe or avoided in areas held or managed by Indigenous Peoples and Local Communities.").

11. See Garnett et al., *supra* note 8, at 369 ("Irrespective of their global diversity, Indigenous Peoples . . . often express deep spiritual and cultural ties to their land and contend that local ecosystems reflect millennia of their stewardship, with Indigenous Peoples' lands representing one of the oldest forms of conservation units."). See also Values of Indigenous Peoples Can Be a Key Component of Climate Resilience, supra note 9 ("[C]ommon values include [I]ndigenous [P]eoples' holistic view of and symbiotic relationship with Mother Earth – a relationship in which life thrives on the recognition of an inalienable interconnectedness and delicate balance Such peoples recognize nature as an integral part of their identity. Safeguarding the health of nature is therefore a fundamental way to show respect and protect one's own health.").

12. Values of Indigenous Peoples Can Be a Key Component of Climate Resilience, supra note 9 ("Indigenous [P]eoples also hold a strong sense of responsibility for intergenerational equity – the principle that every generation holds the Earth in common with members of the present generation and with other generations, past and future. Their knowledge and practices are guided by the principle of how one's action will affect the wellbeing of generations to come.").

13. Jonathan Watts, *We Have 12 Years to Limit Climate Change Catastrophe, Warns UN*, THE GUARDIAN (Oct. 8, 2018), https://perma.cc/83YP-RVH6 ("The world's leading climate scientists have warned there is only a dozen years for global warming to be kept to a maximum of 1.5C, beyond which even half a degree will significantly worsen the risks of drought, floods, extreme heat and poverty for hundreds of millions of people Carbon pollution would have to be cut by 45% by 2030 – compared with a 20% cut under the 2C pathway – and come down to zero by 2050, compared with 2075 for 2C. This would require carbon prices that are three to four times higher than for a 2C target. But the costs of doing nothing would be far higher."). For the kinds of natural disasters that become more frequent due to the emissions of greenhouse gas including the carbon, *see generally* THE OCEAN AND CRYOSPHERE IN A CHANGING CLIMATE: SUMMARY FOR POLICYMAKERS, INTERGOVERNMENTAL PANEL ON CLIMATE

land management across at least 28.1% of the land area. About 7.8 million km² [20.7%] of Indigenous Peoples' lands are within protected areas, encompassing at least 40% of the global protected area . . . with the proportion of Indigenous land in protected areas significantly higher than the proportion of other lands that are protected . . . The striking feature of our analysis is that although Indigenous Peoples' represent <5% of the global population, they currently manage or have rights over many of the world's most sparsely populated, intact places.").

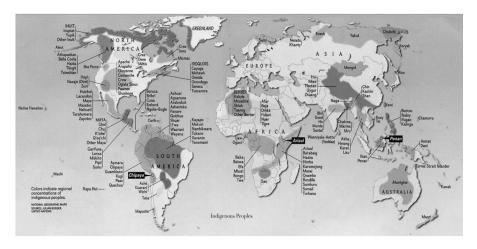


FIGURE 1: Global Map of Indigenous Peoples¹⁴

With only eleven years left to cap global warming to 1.5 degrees Celsius, beyond which, risks of drought, floods, extreme heat, and poverty rise dramatically, ensuring Indigenous Peoples' land rights becomes an important issue of intra-and inter-generational equity.¹⁵ The aforementioned biodiversity preservation in the geographic areas managed by Indigenous Peoples signifies how they have been "better stewards of the land and the sea" than the rest of the world.¹⁶ Although certain national projects promoting biodiversity may not translate into

Change, SPM-10 (H.-O. Pörtner et al. eds., 2019), https://perma.cc/FBY2-HPNM. See also Fiona Harvey, How the UN Climate Panel Got to 1.5C Threshold –Timeline, THE GUARDIAN (Oct. 7, 2018), https://perma.cc/XS8B-7BVG (summarizing events relevant to IPCC reports. The Second Assessment in 1995 reports that "carbon dioxide is the main contributor to warming, and that human actions increasing carbon concentrations in the atmosphere could alter the climate irreversibly." The Fourth Assessment demonstrates that "warming is 'unequivocal' with more than 90% certainty that this comes from human activity" and "human-induced warming of about 2C above pre-industrial levels is adopted as the threshold of safety [on] curbing greenhouse gas emissions.").

^{14.} A Global Map of Indigenous Peoples, PBS, https://perma.cc/BK2H-UUPM (attributing the photo to National Geographic). For millennia, Indigenous Peoples have governed diverse ecosystems to preserve the world's resources for future generations. *Release: First Interactive Global Map of Indigenous and Community Territories Will Help Secure Land Rights Worldwide and Boost Forest Conservation Efforts*, WORLD RESOURCES INST. (Nov. 10, 2015), https://perma.cc/HWX3-TZQQ (introducing the LandMark website); LANDMARK: GLOBAL PLATFORM OF INDIGENOUS AND COMMUNITY LANDS, https://perma.cc/U4BZ-PLPT (last visited Mar. 25, 2020) (clicking on "Explore the maps available on LandMark" allows for viewing the land recognition and documentation status for different Indigenous Peoples).

^{15.} See Watts, *supra* note 13; INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, *supra* note 13.

^{16.} Aristos Georgiou, Indigenous Lands Have Highest Biodiversity: 'We Must Manage a Larger Fraction of World's Area in Ways That Protect Species', NEWSWEEK (Aug. 5, 2019), https://perma.cc/ YP8D-FA5P.

climate resilience,¹⁷ Indigenous Peoples' preservation of existing biodiversity can be "essential for food security and nutrition" and for medical discoveries since the "genetic pool for plants and animal species is found in forests, rivers and lakes and pastures."¹⁸ Furthermore, Indigenous Peoples' environmental stewardship provides various ecosystem services. Generally, "[Indigenous Peoples'] forestlands store at least one quarter of all above-ground tropical forest carbon about [fifty-five] trillion metric tons", or, "four times the total global carbon emissions in 2014."¹⁹ Locally, Indigenous Peoples who inhabit mountainside geographies ensure benefits like preservation of soil, reduction of erosion, conservation of water, and reduction of disaster risks, while the indigenous pastoralist communities continue sustainable cattle grazing and cropping.²⁰

Indigenous Peoples' stewardship practices can create meaningful difference in climate resilience. However, these benefits often remain unrealized because governments deny Indigenous Peoples the right to govern and defend their lands and resources, and generally do not respect their practices.²¹ Indigenous Peoples have long managed areas that have been designated as protected areas in the Amazon within the past few decades.²² Indigenous Peoples' sustainability and

^{17.} See, e.g., Pavan Sukhdev, Biodiversity Protection Can Help Tackle Climate Change and Poverty, THE GUARDIAN (Jun. 10, 2010), https://perma.cc/6MEB-UR8R ("Biodiversity loss- razed rainforests, converted mangroves, lost coral reefs – results in emissions of greenhouse gases. Conversely, reforestation and the restoration of marine ecosystems removes carbon and reduces climate change risks There are many strong links between preserving biodiversity and preventing climate change, and actions to achieve one will usually help the other. Having said that, we need to be careful to avoid potential conflicts between climate mitigation and biodiversity conservation – for example, replacing diverse grasslands with vast plantations of exotic tree species to absorb carbon, or converting tropical peat swamps to oil palm plantations to produce biofuels.").

^{18. 6} Ways Indigenous Peoples Are Helping the World Achieve #ZeroHunger, FOOD AND AGRIC. ORG. OF UNITED NATIONS ("FAO") (Aug. 9, 2017), https://perma.cc/9ZTB-YH8W; Lauren Harper, What is Biodiversity and How Does Climate Change Affect It?, ST. OF THE PLANET, COLUMBIA UNIV. EARTH INST. (Jan. 15, 2018), https://perma.cc/25GF-VKHE ("Loss of habitat—for example, when humans convert meadows into parking lots or backyards—is reducing pollinator populations. If pollinators were to disappear entirely, we would lose over one-third of all crop production. This would reduce or eliminate the availability of foods like honey, chocolate, berries, nuts and coffee. Many modern medicines, like aspirin, caffeine and morphine, are modeled after chemical compositions found in plants. If undiscovered or uninvestigated wildlife species disappear, it would disadvantage scientists trying to uncover new sources of inspiration for future vaccines and medications.").

^{19. 10} Things to Know about Indigenous Peoples, UNITED NATIONS DEV. PROGRAMME ("UNDP") (Jan. 25, 2019), https://perma.cc/A757-G9HA.

^{20.} FAO, *supra* note 18. *See generally* Harper, *supra* note 18 ("Biodiversity also provides ecosystem services or benefits to people. These benefits include: hurricane storm surge protection, carbon sequestration, water filtration, fossil fuel generation, oxygen production and recreational opportunities. Without a myriad of unique ecosystems and their respective diverse plant and animal life, our quality of life may become threatened.").

^{21.} WORLD RESOURCES INST., *supra* note 14 ("Research has shown that while Indigenous Peoples and local communities have customary rights to up to 65 percent of the global land area, they have ownership rights to just 10 percent, leaving the vast majority of their territories available to environmentally destructive development.").

^{22.} See Garnett et al., *supra* note 8. See also Tauli-Corpuz et al., *supra* note 7, at 5–7 (noting global overlap between Protected Areas and Indigenous Peoples' lands as "over 50%," despite expropriation of

conservation practices have reportedly improved forest and biodiversity health.²³ The Amazon has traditionally been a "sink, draining heat-trapping carbon dioxide from the atmosphere," absorbing two billion tons of carbon dioxide out of forty billion tons of carbon dioxide emitted each year.²⁴ The manmade fires in the Amazon alarmingly emit "millions of tons of carbon every day" and result in immense loss of carbon sinks and biodiversity.²⁵ These fires, and their slow entrance into public awareness, lead many to favor putting "forest management back in the hands of indigenous communities," where Indigenous Peoples' management may change the economic incentives of indiscriminate burning for resource extraction, farming, and ranching.²⁶

Indigenous Peoples' lands as Protected Areas, and overlap in titled Indigenous Peoples' territories and Protected Areas in the Amazon; providing also "RAISG map of Indigenous territories and Protected Areas in the Amazon Basin"); Wayne S. Walker et al., *The Role of Forest Conversion, Degradation, and Disturbance in the Carbon Dynamics of Amazon Indigenous Territories and Protected Areas*, 117 PROC. OF THE NAT'L ACAD. OF SCI. U.S.A 3015, 3015 (2020) (describing 1.7 million Amazon Indigenous Peoples and local communities as having been the "guardians of what is now the largest remaining tract of tropical rainforest" for millennia [e.g. from deforestation and associated greenhouse gas emissions] and as inhabitants of "~3,344 [I]ndigenous territories [] and ~522 protected natural areas," as well as underlining the importance of "sustained support" for Indigenous Peoples' and local communities' stewardship of Amazon forests by noting how there is an increased release of carbons from Indigenous territories and protected natural areas due to forest degradation or disturbance); Jonas Gregorio de Souza et al., *Pre-Columbian Earth-Builders Settled Along the Entire Southern Rim of the Amazon*, 9 NATURE COMMS. 1, 2 (2018) (including a map of archeological evidence widespread across the Amazon Basin).

23. CLAUDIA SOBREVILA, WORLD BANK, THE ROLE OF INDIGENOUS PEOPLES IN BIODIVERSITY CONSERVATION: THE NATURAL BUT OFTEN FORGOTTEN PARTNERS 1, 5 (May 2008), https://perma.cc/ 3PHZ-7LPM ("The Amazon forests in Brazil have been dwindling for decades. There is evidence that the scope of destruction depends upon who uses the land. A recently produced map of the Brazilian Amazon shows that natural ecosystems have improved conservation potential when Indigenous Peoples inhabit them.").

24. Anna Jean Kaiser, *AP Explains: Role of the Amazon in Global Climate Change*, AP NEWS (Aug. 27, 2019), https://perma.cc/5MLU-DEHG (referring to Carlos Nobre, a University of Sao Paulo climate scientist).

25. Id.

26. See, e.g., William Thomson, To Save Our Forests, Give Them Back to the People They Were Stolen From, QUARTZ, Sept. 5, 2019, https://perma.cc/EG8L-QM9F (noting that the recent fire gained public traction only after Amazon had burnt for several weeks and "the fires hit numbers not seen in decades;" referring to statement of Alberto Setzer, a researcher at Brazil's National Institute for Space Research, that there were no weather or other conditions to explain the fire; and suggesting that the fires were likely driven by economic if not for political reasons). The recent fire distinguishes from Indigenous Peoples' practice of "low-intensity burns set in order to regularly clear brush and prevent larger, more intense fires." See id. ("Prohibiting indigenous communities from managing today's park lands has actually increased the likelihood and intensity of forest fires over time."). See also J. Marion Adeney et al., Reserves Protect against Deforestation Fires in the Amazon, PLOS ONE (Apr. 8, 2009) ("In Rondônia, a massively deforested area, the contrast between fires inside and outside reserves was striking [Fig. 6b]. In the centrally located indigenous reserve, the few hot pixels occurred in naturally dry ecosystems [non-forest, visible as light spots on the image]. Protected parks here also suffered few fires, but this was likely because indigenous reserves surrounded them. In the north, there were many fires within a limited-use area. This suggests that limited-use reserves are less effective than those 'policed' by indigenous peoples. This finding was confirmed by Ribeiro et al. who found that deforestation in indigenous lands in Rondônia remained close to zero between 1997 and 2004, but raised concern about state sustainable use areas subject to high deforestation rates These examples

Tragically, despite being stewards and co-beneficiaries of our planetary legacy, many Indigenous Peoples and rural, isolated migrant communities suffer daily indignities associated with poverty, disenfranchisement, and weak land tenure and property rights. Globally, Indigenous Peoples' livelihoods depend on existing natural resources necessary for fishing, grazing, hunting, gathering, farming, and agroforestry. All these activities can be susceptible to climate change risks such as increased temperature, drought, deforestation, and soil erosion.²⁷ Indigenous Peoples are also "subject to (relatively) poor socioeconomic conditions (including poor health, high unemployment, low levels of education, and greater poverty)."²⁸ Although Indigenous Peoples are less than five percent of the world population, they account for about fifteen percent of the poorest population.²⁹ Indigenous Peoples' political and social influence often remains weak and limited given that political and economic decisions tend to focus on the general public while ignoring the needs, attitudes, and interests of people with different socioeconomic and cultural backgrounds.³⁰ In short, while Indigenous Peoples have well-developed capacities to deal with many natural hazards through traditional knowledge systems, including construction which takes into account local environments and skills for using local materials,³¹ Indigenous Peoples' priorities and needs remain largely unaccounted for in the political system.³²

illustrate the importance of local factors to the success of any reserve in protecting forest. As Nepstad et al. also noted, the lack of obvious differences among reserve types is important, and demonstrates the usefulness of any reserve as protection against fire and deforestation. Lack of law enforcement and land thievery of 'empty' government lands in the Amazon is a huge challenge. A reserve provides one important protection - especially if there is local enforcement, such as indigenous peoples with legal tenure In the state of Roraima, the still fiercely contested indigenous reserve Raposa Serra do Sol is a current example of indigenous inhabitants advocating reserve creation to safeguard their land and resources from powerful economic interests, with benefits for biodiversity conservation. Inhabited reserves thus might provide effective and [in some cases] politically feasible alternatives to more destructive land uses along new and existing roads, especially in contested areas."). C.f., Jayalaxshmi Mistry et al., Community Owned Solutions for Fire Management in Tropical Ecosystems: Case Studies from Indigenous Communities of South America, 371 PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOC'Y B (2016) ("Emerging research shows the fundamental role of Indigenous land-use practices for controlling deforestation and reducing CO2 emissions-analysis of satellite imagery suggests that Indigenous lands have reduced rates of deforestation and habitat conversion, and lower greenhouse gas (GHG) emissions, compared with surrounding areas.").

27. NANCY J. TURNER ET AL., INDIGENOUS PEOPLES' FOOD SYSTEMS AND WELL-BEING 26, 32 (2013).

28. Omar-Dario Cardona et al., *Determinants of Risk: Exposure and Vulnerability, in* MANAGING THE RISKS OF EXTREME EVENTS & DISASTERS TO ADVANCE CLIMATE CHANGE ADAPTATION: SPECIAL REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 85 (Christopher B. Field et al. eds., 2012) (noting several case studies from Indigenous Peoples in Canada, Australia, the Pacific, and Small island states).

30. Cardona et al., supra note 28.

31. Id. (referring to J.R. Campbell, Traditional Disaster Reduction in Pacific Island Communities, GNS SCI. (2006)).

32. Samid Suliman, *Indigenous (Im)mobilities in the Anthropocene*, 14 MOBILITIES 298, 301 (2019) (noting that they are "un- or under-represented in formal multilateral climate governance").

^{29.} UNDP, supra note 19.

As in other societies, Indigenous Peoples grapple with greed, violence, and base instincts, and their worlds should not be romanticized.³³ Their traditional livelihoods, cultural patrimony, and cohesion also continue to endure mounting change.³⁴ This reality does not detract, however, from the remarkable resilience and wealth of ecosystem knowledge accumulated by indigenous, tribal, and other traditional societies across the Americas, Asia/Pacific, and Africa.³⁵ Professor

34. Although "heritage" can be deemed as more gender-sensitive term, "cultural patrimony" was given a narrower meaning. See, e.g., James A. R. Nafziger, Cultural Heritage and Patrimony, ENCYCLOPEDIA OF L. & SOC'Y: AM. & GLOBAL PERSPS. (David S. Clark, ed., 2007) ("that part of a national, tribal, or other society's culture, which is so fundamental to the society's identity and character that people deem it inalienable. The term embraces tangible historic or archaeological sites and objects as well as intangible phenomena, such as folklore, rituals, language, and craft skills. It is often associated with the broader term cultural heritage. . . ."). See also Native American Graves Protection and Repatriation Act of 1990, 25 U.S.C. § 3001 (2000) ("[Cultural patrimony is] an object having ongoing historical, traditional, or cultural importance central to the Native American group or culture itself, rather than property owned by an individual American, and which, therefore, cannot be alienated, appropriated, or conveyed by any individual whether or not such individual is a member of the Indian tribe or Native Hawaiian organization and such object shall have been considered inalienable by such Native American group at the time the object was separated from such group."); Environment, UNITED NATIONS, https://perma.cc/5KHM-SEUE (last visited Nov. 6, 2019) ("Large dams and mining activities have caused forced displacement of thousands of indigenous persons and families without adequate compensations in many countries. Several communities have been moved out of national parks against their will, while tourist development in some countries has resulted in the displacement of indigenous people and their increasing poverty. When indigenous peoples have reacted and tried to assert their rights, in most instances they have suffered physical abuse, imprisonment, torture and even death. . . . For many indigenous peoples, climate change is already a reality, and they are increasingly realising that climate change is clearly not just an environmental issue, but one with severe socioeconomic implications The rights to lands, territories and resources are at the heart of indigenous peoples' struggles around the world. Indigenous peoples' relationships to ancestral lands are the source of cultural, spiritual and social identity, and form the basis of their traditional knowledge systems.").

35. Laurence J. Kirmayer et al., *Rethinking Resilience from Indigenous Perspectives*, 55 THE CAN. J. PSYCHIATRY 84, 86, 88–89 (underlying how indigenous people maintained their resilience through narratives and how others may also learn from such practices: "Narrative speaks directly to the ruptures

^{33.} See, e.g., Marco Gardini, Land Transactions and Chieftaincies in Southwestern Togo, 47 AFR. SPECTRUM 51, 53 (2012) ("Land conflicts and frauds concerning land sold twice over are on the increase, as many Togolese chieftaincies can attest. Even in official speeches, conflicts over land ownership are stated to be the main cause of death after malaria and AIDS, implicitly arguing that the perceived increase in attacks of witchcraft is proportional to the increase in social tensions related to land access."); Jonathan Watts, The Amazon Tribe Protecting the Forest with Bows, Arrows, GPS and Camera Traps, THE GUARDIAN (Sept. 9, 2015), https://perma.cc/2B95-KNPN ("Another of the [Ka'apor Indians'] leaders Miraté Ka'apor says the use of violence - which has resulted in some broken bones but no deaths among the loggers – is justified. 'The loggers come here to steal from us. So, they deserve what they get. We have to make them feel our loss – the loss of our timber, the destruction of our forest.' Compared with the past, he said the missions were effective. 'Our struggle is having results because the loggers respect us now.' But the loggers also appear to be responding with lethal force. On 26 April, a former chieftain, Eusébio Ka'apor was murdered by gunmen on his way back from a visit to his brother. Like most killings of indigenous people and environmental activists in Brazil, the crime has not been solved, but the dead man's son has little doubt who is responsible and what they were trying to achieve."). UNDP, supra note 19 ("More than one in three indigenous women are sexually assaulted during their lifetime, and they also have higher rates of maternal mortality, teen pregnancy, and sexually transmitted diseases. The Declaration on the Rights of Indigenous Peoples draws attention to the needs and rights of indigenous women and calls for action to protect them from violence.").

Brown Weiss's holistic approach to human rights as well as her emphasis on accountability and future generations help us navigate Indigenous Peoples' complex and troubled historical legacy, which endures from Standing Rock Reservation in North Dakota to the inundated shores of threatened indigenous communities in the rising seas of the South Pacific.³⁶

This Article focuses on Indigenous Peoples and protecting their endangered natural and cultural patrimony in light of changing international law. The world's remaining regions harboring Indigenous Peoples represent a disproportionately large area of relatively undeveloped forests, waterways, and remote ecosystems, which are key to our global commons.³⁷ These resources are crucial for providing resilience in the near future of unknown climactic stresses and perturbations. Indigenous Peoples and other marginalized rural people in remote locations can act as stewards and guardians for much of our remaining ecosystems.³⁸ Their

of cultural continuity that occurred with the systematic suppression and dismantling of indigenous ways of life that resulted in a profound sense of dislocation and despair. Narrative resilience therefore has a communal or collective dimension, maintained by the circulation of stories invested with cultural power and authority, which the individual and groups can use to articulate and assert their identity, affirm core values and attitudes needed to face challenges, and generate creative solutions to new predicaments. . . . Aboriginal notions of personhood root identity in a person's connections to the land and environment.... Thinking about the person as fundamentally connected to the environment dissolves the opposition between nature and culture. The human predicament then becomes one of working with powerful forces both within and outside the individual. Approached with respect, the natural environment provides not only sustenance but also sources of soothing, emotion regulation, guidance, and healing These ways of narrating identity and collective experience can contribute to resilience through emotion regulation, problem solving, social positioning, and collective solidarity."). On the value of the indigenous peoples' knowledge, see e.g. Jim Robbins, Native Knowledge: What Ecologists Are Learning from Indigenous People, YALEENVIRONMENT360 (Apr. 26, 2018), https://perma.cc/37FM-QFSB ("While he was interviewing Inuit elders in Alaska to find out more about their knowledge of beluga whales and how the mammals might respond to the changing Arctic, researcher Henry Huntington lost track of the conversation as the hunters suddenly switched from the subject of belugas to beavers. It turned out though, that the hunters were still really talking about whales. There had been an increase in beaver populations, they explained, which had reduced spawning habitat for salmon and other fish, which meant less prey for the belugas and so fewer whales. 'It was a more holistic view of the ecosystem It would be pretty rare for someone studying belugas to be thinking about freshwater ecology. . . . People have relied on this detailed knowledge for their survival,' Huntington and a colleague wrote in an article on the subject. 'They have literally staked their lives on its accuracy and repeatability.'").

36. See Zoë Jackson, "For the Future": Doing Indigenous History After Standing Rock, PERSPS. ON HIST. (Mar. 9, 2018), https://perma.cc/6EBZ-3YYR.

37. See Garnett et al., supra note 8.

38. Alexander Zaitchik, *How Conservation Became Colonialism: Indigenous People, Not Environmentalists, Are the Key to Protecting the World's Most Precious Ecosystems,* FOREIGN POL'Y (Jul. 16, 2018), https://perma.cc/C957-WN3A ("The episode illustrates a tension that threatens to undermine conservation efforts in Cayambe Coca and thousands of other protected areas around the world. Like many other indigenous communities whose ancestral homes sit inside state-sanctioned conservation zones, the Cofán are victims of a sort of green colonialism. Cayambe Coca and parks like it may have been founded with the best of intentions: to safeguard endangered biospheres. But the way these protected areas have been established and maintained has damaged the lives of the indigenous peoples who live within their borders, forcing them into what is effectively a landlord-tenant relationship with the state that deprives them of control over their land. Because the local governments often lack the will or resources to prevent industry encroachment, many such arrangements also end up

plight further underscores the importance of Professor Brown Weiss's contributions to promoting resilient economies, good governance, and equity in policies and laws supporting land tenure, property rights, and community resource governance. Three of Professor Brown Weiss's most enduring contributions provide us with keys to a path forward: (1) a kaleidoscopic, holistic approach to international environmental law; (2) attention to accountability; and (3) attention to intergenerational equity. Just as her scholarship has informed and inspired countless legal scholars and practitioners in a variety of fields,³⁹ her ideas continue to suggest ways to better guarantee the property and cultural rights for Indigenous Peoples, whose rich cultural patrimony and troubled fates offer a window into today's rising climate crisis.

The Article focuses on Professor Brown Weiss's contributions to establishing a level playing field for indigenous and other local people to claim and preserve their land rights. Their stories illustrate how Professor Brown Weiss helps usher us towards a legal architecture that honors traditional and modern customs and laws in support of good governance for marginalized people in a time of rising climate change crisis. The Article proposes two threshold positions needed to achieve Professor Brown Weiss's vision. First, mitigating and adapting to myriad climate and ecosystem changes on an increasingly crowded planet depends on managing finite land, food, fuel and natural resources. Second, defining important stakeholder groups and their respective positions on ecological rights and duties sets a framework for negotiating sustainable ecosystem management. For example, the landscape settings for extractive industries in developing countries often involve large areas with many different public and private actors including government officials, local communities, migrant populations, businesses, and international aid or non-governmental organization workers. Working to establish a level playing field for Indigenous Peoples as a basis for sustainable development begins with identifying communities impacted within any given area and their

undermining their creators' explicit goal: conservation. This double failure is part of the complicated legacy of the modern conservation movement . . . A growing body of research from resource economists and conservation groups has shown that granting indigenous peoples title to their lands — the legal recognition of land ownership — is the low-hanging fruit of successful rainforest conservation and climate mitigation. The findings confirm what native groups have been saying for decades."). *See also* Tauli-Corpuz et al., *supra* note 7.

^{39.} See, e.g., Thomas N. Gladwin et al., Shifting Paradigms for Sustainable Development: Implications for Management Theory and Research, 20 ACAD. OF MGMT. REV. 874, 874, 891 (1995) (noting Weiss' notion of intergenerational equity, that "current generations are obligated not to reduce the liberties, opportunities, welfare-generating potentials available to future generations to levels below those enjoyed at present," and arguing that the integrative paradigm of management is necessary to overcome a "fractured epistemology which separates humanity from nature and truth from morality."); PHILLIPPE SANDS ET AL., PRINCIPLES OF INT'L ENVT'L L. 209 (3d ed. 2012) (quoting Weiss for "[t]he idea that, as 'members of the present generation, we hold the earth in trust for future generations' [which] is well known to international law, having been relied upon as early as 1893 by the United States in the Pacific Fur Seal arbitration").

property rights and concomitant duties.⁴⁰ Without these two starting points, the promise of sustainable development and good governance remains broken.

I. INDIGENOUS PEOPLES' PROPERTY RIGHTS AND ENVIRONMENTAL GOVERNANCE

For centuries, Indigenous Peoples around the world have suffered myriad historical challenges to having their land rights recognized. Colonization and the attending socio-political imperatives of control and profit largely ignored or suppressed traditional systems of ecosystem management and customary legal systems in favor of colonialists' interests.⁴¹ For example, when Magellan planted a large wooden cross on a Philippine island in 1521, he claimed to have appropriated all Filipino forbears' sovereignty and property rights.⁴² This bold declaration set in motion centuries of colonial usurpation of native lands.⁴³ It also rendered Indigenous Peoples as "squatter[s], bereft of any legal rights to land or any other natural resources," pushing them to "procur[e] a documented property right from the Spanish regime, or its state-successors" in order to be recognized as rightful occupants or landowners.⁴⁴ Four hundred years after Magellan's claims over Philippines, U.S. Supreme Court Justice Oliver Wendell Holmes, in *Carino v. The Insular Government*, wrote a unanimous decision that held land occupied in the Philippines since time immemorial was never public land.⁴⁵ This landmark

43. See, e.g., Owen J. Lynch & Kirk Talbott, Balancing Acts: Community Based Forest Management and National Law in Asia and the Pacific (1995).

^{40.} See Section II, infra.

^{41.} Brenda L. Gunn, *Protecting Indigenous Peoples' Lands: Making Room for the Application of Indigenous Peoples' Laws within the Canadian Legal System*, 6 INDIGENOUS L.J. 31, 33 (2007) ("Another aspect of colonization was the imposition of Western law on Indigenous peoples, including property law. Through the creation of the Canadian nation, Indigenous peoples' legal systems were suppressed. Today, there is a rift between what laws are officially recognized as part of the legal matrix and the *de facto* legal system.").

^{42.} Armi Beatriz E. Bayot, *Free*, *Prior*, and *Informed Consent in the Philippines: A Fourth World Critique*, in HUMAN RIGHTS IN THE EXTRACTIVE INDUSTRIES: TRANSPARENCY, PARTICIPATION, RESISTANCE 281, 289 (Isabel Feichtner et al. eds., 2019) (quoting Lynch: "According to the [Regalian] Doctrine . . . the sovereign and property rights (*imperium and dominion*) of the Philippine peoples' forebears were unilaterally usurped by, and simultaneously vested in, the Crowns of Castille and Aragon. Although there appears to be no official determination, the only plausible date is Easter Sunday, March 31, 1521.").

^{44.} Bayot, *supra* note 42, at 289 ("On that day Ferdinand Magellan and his crew planted a large wooden cross on the Island of Limasawa. At that same five-hundred-year-old unspecified moment, every native . . . became a squatter, bereft of any legal rights to land or any other natural resources . . . The only way to remove the squatter label was by procuring a documented property right from the Spanish regime, or its state-successors. Regalian Doctrine, [thereon] invalidates all claims to land that have existed prior to the establishment of the colonial government in the Philippine islands or that claim to be independent of any government grant.").

^{45.} Carino v. Insular Gov't of the Philippine Islands, 212 U.S. 449, 460 (1909) ("It is true that, by § 14, the government of the Philippines is empowered to enact rules and prescribe terms for perfecting titles to public lands where some, but not all, Spanish conditions had been fulfilled, and to issue patents to natives for not more than 16 hectares of public lands actually occupied by the native or his ancestors before August 13, 1898. But this section perhaps might be satisfied if confined to cases where the occupation was of land admitted to be public land, and had not continued for such a length of time and

ruling in international jurisprudence established Indigenous Peoples' community land tenure rights to private lands in the remote jungles of insular Asia.⁴⁶ It set a precedent for the later recognition of ancestral domain in 1997,⁴⁷ and it punctured the myth of public lands as essentially unoccupied or unclaimed, ready for taking and exploitation.⁴⁸

Even after the *Carino* decision, however, many Indigenous Peoples in the Philippines were still largely ignored by their respective national governments and policy makers. Post-colonial governments often "continued along development paths charted out by their former colonial masters, and retained the legal framework established under colonialism," which continued to downplay local management and local interest in accessing natural resources.⁴⁹ Like the colonialists of the past, the national governments treated Indigenous Peoples' lands as

47. Indigenous Peoples Rights Act (IPRA), An Act to Recognize, Protect and Promote the Rights of Indigenous Cultural Communities/Indigenous Peoples, Creating a National Commission on Indigenous Peoples, Establishing Implementing Mechanisms, Appropriating Funds Therefor, and for Other Purposes, Rep. Act No. 8371, 94 O.G. 13, 2276 (Oct. 29 1997) (Phil.).

48. See, e.g., Gunn, supra note 41; Jérémie Gilbert, Land Grabbing, Investments & Indigenous Peoples' Rights to Land and Natural Resources: Case Studies and Legal Analysis, INT'L WORK GRP. FOR INDIGENOUS AFF. (IWGIA) 14 (2017); Bayot, supra note 42, at 293 ("The IPRA [passed in 1997] is noteworthy because, in an apparent break with the Regalian Doctrine, it honors native title, or 'preconquest rights to lands and domains which, as far back as memory reaches, have been held under a claim of private ownership by ICCS/IPs, have never been public lands and are thus indisputably presumed to have been held that way since before the Spanish Conquest.' It guarantees the right of indigenous peoples to their ancestral domain, which it defines as all areas generally belonging to ICCs/ IPs comprising lands, inland waters, coastal areas, and natural resources, held under a claim of ownership, occupied or possessed by ICCs/ IPs, by themselves or through their ancestors, communally or individually since time immemorial.'').

49. See, e.g., Annie Patricia Kameri-Mbote & Philippe Cullet, Law, Colonialism and Environmental Management in Africa, 6 ENVTL. MGMT. IN AFRICA 23, 27 (1997) ("[Such following of colonial masters' footsteps] has tended to aggravate the social and environmental impacts created by colonial laws. Continued emphasis on cash crop production for foreign exchange has, for instance, subjected African countries to the vagaries of international commodity price fluctuations. At the local community level, independence did not entail the involvement of communities into the development process and the role of local people in the regulation of natural resources continues to be overlooked to date. Local people have therefore often come to see nature reserves as government property. This tends to create

under such circumstances as to give rise to the understanding that the occupants were owners at that date. We hesitate to suppose that it was intended to declare every native who had not a paper title a trespasser, and to set the claims of all the wilder tribes afloat.... [E]very presumption is and ought to be against the government in a case like the present.").

^{46.} John Herico Laudet Balisnomo, *Ancestral Domain Ownership and Disposition*, 42 ATENEO L.J. 160, 188–189 ("The case involved a petition filed by Mateo Cariño, an *Ibaloi*, before the Land Registration Court asking that he be registered as he owner of a 146-hectare land used for swidden agriculture and pasture located in Benguet. Cariño presented no documentary evidence except a *titulo de informacion posesoria* obtained in 1901. His claim was based on an allegation that his ancestors have used and occupied the land since time immemorial. Cariño asserted that he inherited the land from his father in accordance with Igorot custom."); HELEN TUGENDHAT & ELEANOR DICTAAN-BANG-OA, TEBTEBBA FOUND., REALIZING INDIGENOUS WOMEN'S RIGHTS: A HANDBOOK ON THE CEDAW 36 (2013) ("A landmark in international jurisprudence for indigenous peoples is the Mateo Cariño doctrine being used today by indigenous peoples to argue the validity of their claims of native title over their lands and territories.").

"vacant" so as to facilitate nationalist plans to modernize through commercial and industrial-scale agriculture and housing developments.⁵⁰ By doing so, national governments superseded Indigenous Peoples' interests in communal land management and threatened their environment-dependent livelihoods.⁵¹ More than ten million Burmese, for instance, many from ethnic groups in rugged, mountainous border regions, have lost access to their traditional lands and became landless agricultural or mining laborers in the face of various national plans including plantation agriculture, resource extraction, and protected area and infrastructure projects.⁵²

51. Gilbert, *supra* note 48 ("For many indigenous communities, these huge investments in land for commercial and industrial purposes are not only denying them access to their primary source of livelihood but are also leading to deforestation and a change in the biodiversity of their ancestral lands and territories.").

52. Edith T. Mirante, Burma-Frontier Minorities in Arms, CULTURAL SURVIVAL Q. MAG. (Dec. 1987), https://perma.cc/SD9J-VYZ5 (listing ethnic minorities living in the mountain areas like Kachin, Karen, and Chin). See e.g. "The Farmer Becomes the Criminal": Human Rights and Land Confiscation in Karen State, HUMAN RIGHTS WATCH (Nov. 3, 2016), https://perma.cc/XA2G-ZJQ3 ("In Burma, where 70 percent of people earn a living through agriculture, securing land is often equivalent to securing a livelihood. But instead of creating conditions for sustainable development, recent Burmese governments have enacted abusive laws, enforced poorly conceived policies, and encouraged corrupt land administration officials that have promoted the displacement of small-scale farmers and rural villagers Land disputes are a major national problem, with rising discontent over displacement for plantation agriculture, resource extraction, and infrastructure projects-often without adequate consultation, due process of law, or compensation for those displaced. In many parts of the country, those contesting land seizures have taken to the streets in frequent demonstrations but have faced retaliation in the courts."); CONSERVATION ALLIANCE OF TANAWTHARI, OUR FOREST, OUR LIFE: PROTECTED AREAS IN TANINTHARYI REGION MUST RESPECT THE RIGHTS OF INDIGENOUS PEOPLES (Feb. 2018), ("The onset of rapacious resource extraction, agribusiness expansion and special economic zone [] development in recent years has propelled the forest department and International Non-Governmental Organizations (INGOs) to conserve Tanintharyi's forests As a ceasefire has been in place between the Karen National Union [] and the Myanmar government over the past five years, IDPs and refugees who have been living along the Thai-Myanmar border have started to return, many finding that their lands are now proposed or classified as Protected Areas. The establishment of conservation zones in post-conflict areas denies displaced communities the right of return. Protected Area Proposals have [also] been carried out without the Free Prior Informed Consent [] of local communities who would be directly affected. Many still have little or no knowledge of the proposals that stand to extinguish their access to resources and land."); CENTRAL INTELLIGENCE AGENCY, The CIA World Factbook 2019-2020 (2020) ("[D]omestically, adults and children from ethnic areas are vulnerable to forced labor on plantations and in mines, while children may also be subject to forced prostitution, domestic service, and begging.").

antagonistic relations between potential users and government officials, and in many cases leads to the former encroaching on public gazetted forests to which they view their access as unjustifiably denied.").

^{50.} See, e.g., J.S. Fingleton, Legal Recognition of Indigenous Groups, FAO LEGAL PAPERS 1, 5 (1998), https://perma.cc/Q94K-KU8S ("In many countries of Asia, legal provision for groups is relatively sparse, in part because communal resource management regimes may be regarded by governments as 'politically suspect, or an obstacle to their programs of nationalist modernization."); Gilbert, supra note 48 ("A justification for this ignorance of indigenous peoples' land rights relates to a colonial narrative around the concept of 'empty', 'vacant' or 'unused' land. . . . [A]lthough once rejected, the theory that some lands are not occupied when indigenous peoples live on them seems to be coming back, under the precept of 'unused' or 'vacant' land, in order to justify the forced removal of indigenous peoples to make way for commercial and industrial developments.")

Legislative enactments granting Indigenous Peoples' collective land rights in many countries have brought mixed results, unfortunately.⁵³ Most legal systems have adopted the Western concept of property rights that tends to be individualfocused and exclusive. Indigenous Peoples' notion of collective land use, however, allows for multiple overlapping rights to use lands. Rights are open to negotiation as conditions change, sometimes varying annually or seasonally, depending on drought conditions, or reflecting changes in social relationships. Individuals do not own land or resources; rather, they use them according to customary law.⁵⁴ Where governments granted collective land rights on the basis of indigeneity, the legislators nonetheless gave authorities power to decide "who qualif[ies] as indigenous," such that they "reserve[d] a degree of control over the allocation of land" and pushed the "resource users in[to] the position of having to invest in relations with state agents to maintain access."55 Also, unlike most legal systems' Western adjudication methods that use "formal and written evidence," Indigenous Peoples have used customs, traditions, and land laws that were "oral and not formally written."56 These disconnects continue to undermine good governance by creating grey legal areas and a lack of acceptance in traditional laws and customs that tend to be filled by the wealthy and powerful. Despite these challenges, Professor Brown Weiss and others' leadership is helping to build good jurisprudence supporting Indigenous Peoples' rights.⁵⁷

A. KEY ELEMENTS IN THE GLOBAL KALEIDOSCOPE

Professor Brown Weiss describes the increasing growth and diversity of entities influencing international law and governance as "kaleidoscopic," involving "constantly changing" actors and coalitions.⁵⁸ She specifies several fundamental

^{53.} See Janis Alcorn, *Tenure and Indigenous Peoples*, USAID (Jul. 1, 2013), https://perma.cc/8QBJ-H9JR.

^{54.} Jérémie Gilbert & Ben Begbie-Clench, *Mapping for Rights: Indigenous Peoples, Litigation and Legal Empowerment*, ERASMUS L. REV. 6, 7 (2018), https://perma.cc/PJW5-N5FJ (referring to what Ian Scoones described as "fuzzy access rights" in *New Directions in Pastoral Development in Africa*, LIVING WITH UNCERTAINTY: NEW DIRECTIONS IN PASTORAL DEVELOPMENT IN AFRICA (Ian Scoones ed., 1994)).

^{55.} Willem Van Der Muur, *Forest Conflicts and the Informal Nature of Realizing Indigenous Land Rights in Indonesia*, 22 CITIZENSHIP STUDIES 160, 163 (2018), https://perma.cc/G53T-4DUE (referring to Jesse C. Ribot & Nancy Lee Peluso, *A Theory of Access*, 68 RURAL SOC. 153, 163, 168 (2003)).

^{56.} See, e.g., Jérémie Gilbert, Historical Indigenous Peoples' Land Claims: A Comparative and International Approach to the Common Law Doctrine on Indigenous Title, 56 INT'L & COMP. L.Q. 583, 610 (2007).

^{57.} See generally Indigenous and Tribal People's Rights over Their Ancestral Lands and Natural Resources: Norms and Jurisprudence of the Inter-American Human Rights System, INTER-AM. COMM'N ON HUMAN RIGHTS, ORG. OF AM. STATES, OEA/Ser.L/V/II. Doc. 56/09 (Dec. 30, 2009), https://perma. cc/LUT5-785D (providing a comprehensive overview of how international human rights law contributed to establishing standards that recognize Indigenous Peoples' rights to their lands and other resources).

^{58.} Edith Brown Weiss, *On Being Accountable in a Kaleidoscopic World*, AM. SOC' OF INT'L L. 477, 477 (2010).

elements contributing to evolving international law: globalization and integration of international institutions and networks; fragmentation and decentralization in states' decision-making; and bottom-up empowerment among highly diverse peoples and civilizations.⁵⁹ Noting how the modern age is affected by "rapid and often unforeseen changes with widespread effects" as well as "global problems that affect everyone," she underlines the importance of imagining and trying different configurations of international enforcement.⁶⁰ She thereby emphasizes not only state participation in international law enforcement, but also carrying out international regulation by non-state entities and voluntary cooperation based on consensus of shared values and concerns.⁶¹ Her perspective expands the traditional view of actors and elements of international law. Professor Brown Weiss especially notes the potential of advanced information technology for arranging "ever shifting ad hoc coalitions and informal groups and a myriad of individual initiatives."⁶²

Just as she describes how international law and governance is becoming more complex and involves more diverse actors and networks, many scholars mention how international human rights law has "played an important role" in facilitating national governments to accommodate Indigenous Peoples' rights.⁶³ They commonly refer to the adoption of the International Labor Organization's ("ILO") Convention No. 169 Concerning Indigenous and Tribal Peoples in Independent Countries and of the United Nations Declaration on the Rights of Indigenous Peoples ("UNDRIP").⁶⁴ In 1921, the ILO conducted a study on the contractual work conditions that "native workers" would face in the European colonies, starting "ILO's long-standing task of preparing international regulations concerning the situation of dependent peoples faced with pressure and even assimilation from external cultures."65 Under the leadership of ILO, a regional development plan "Andean Indian Programme" was carried out, "involving several countries and the [I]ndigenous [P]eoples living there."66 The program produced a detailed study in 1953, which served as a useful reference for discerning Indigenous Peoples' living and working conditions.⁶⁷ ILO also adopted various conventions to strengthen Indigenous Peoples' basic human rights including No. 107

^{59.} Edith Brown Weiss, *International Law in a Kaleidoscopic World*, 1 ASIAN J. INT'L L. 21, 21 (2011), https://perma.cc/CUJ8-UWMY.

^{60.} *Id.* at 22, 30–32.

^{61.} Id.

^{62.} Id. at 21.

^{63.} See, e.g., Nigel Bankes, International Human Rights Law and Natural Resources Projects within the Traditional Territories of Indigenous Peoples, 47 ALTA. L. REV. 457, 458–459 (2010). 64. Id. at 459.

^{65.} Lee Swepston & Gudmundur S. Alfredsson, *The Rights of Indigenous Peoples and the Contribution by Erica Daes, in* JUSTICE PENDING: INDIGENOUS PEOPLES AND OTHER GOOD CAUSES: ESSAYS IN HONOUR OF ERICA-IRENE DAES 69, 70 (Gudmundur S. Alfredsson & Maria Stavropoulou eds., 2002).

^{66.} *Id*. at 70–71. 67. *Id*.

Convention which called on states to protect customary laws and other essential matters regarding "labor, social security, health, vocational training, and general education to achieve equal treatment."⁶⁸ Due to a growing criticism of No. 107 Convention's "patronizing attitude" towards Indigenous Peoples and seeming promotion of their eventual disappearance as separate groups, the No. 169 Convention ("ILO 169 Convention") was adopted.⁶⁹ The latter pushed national governments to recognize Indigenous Peoples' aspirations to control their institutions, languages, and identities, and to sustain and develop their social, cultural, religious, and spiritual practices.⁷⁰ As part of such attempts, it called on states to provide certain prior consultation processes at "all levels in the formulation, implementation and evaluation of measures and programs" that directly affect Indigenous Peoples—including land or resource use matters.⁷¹

UNDRIP, which is not legally-binding and does not require nations to take particular actions, was adopted by 144 countries in 2007, after twenty-five years of lobbying efforts.⁷² However, most member states continue to avoid ratifying the ILO 169 Convention, fearing that acknowledging the subgroups' land rights will undermine their national unity.⁷³ Despite lack of international support, the ILO 169 Convention remains "the only modern international legally binding instrument" that establishes minimum protection for Indigenous Peoples.⁷⁴ As of 2019, twenty-three member states had ratified the ILO 169 Convention, and several of these member states had subsequently amended their constitutions or legislated for Indigenous Peoples' rights.⁷⁵ Most notably, most Latin American countries revised their constitutions to incorporate the Convention.⁷⁶

76. Yupsanis, *supra* note 70, at 453. *See generally* INT'L LABOUR ORG., APPLICATION OF CONVENTION NO. 169 BY DOMESTIC AND INTERNATIONAL COURTS IN LATIN AMERICA: A CASEBOOK 6 (2009), https:// perma.cc/5Q66-KRLP; Ratifications of C169 - Indigenous and Tribal Peoples Convention, 1989 (No.

^{68.} Id. at 72.

^{69.} See id. at 72 (noting that the No.107 Convention was criticized for taking "a patronizing attitude" and promoting Indigenous Peoples' eventual disappearance as separate groups by providing them opportunities to participate in and benefit from the national socioeconomic development), 75 (describing that the criticism of the No.107 led to the No. 109).

^{70.} Athanasios Yupsanis, ILO Convention No. 169 Concerning Indigenous and Tribal Peoples in Independent Countries 1989–2009: An Overview, 79 NORDIC J. INT'L L. 433, 436 (2010).

^{71.} Id. at 440.

^{72.} UNDRIP, supra note 1.

^{73.} Yupsanis, supra note 70, at 451.

^{74.} Id. at 433, 455-456.

^{75.} *Id.* at 453–454 (noting briefly instances of Paraguay, Columbia, Philippines, Norway, and mentioning that the No. 169 had greatest impact on Latin America); Chris Swartz, *After 30 Years, Only 23 Countries Have Ratified Indigenous and Tribal Peoples Convention ILO 169*, CULTURAL SURVIVAL (Jun. 5, 2019), https://perma.cc/C24E-9A3C ("Since 1989, only 23 countries have ratified the treaty, and ILO 169 continues to hold those governments accountable for violations The ILO 169 Convention simultaneously is a legal agreement and offers technical assistance to countries that ratify By ratifying the convention, a country also gains access to the ILO's "supervisory mechanisms, technical assistance programmes, and tripartite constituents (government, employers, and workers) that would facilitate the monitoring of the implementation" of domestic laws and policies. This is an invaluable resource to governments seeking to repair and improve the relationship with Indigenous Peoples.").

Professor Brown Weiss's kaleidoscopic worldview, as expressed in her teaching and scholarship, allows for a deeper understanding of the dimensions impacting even the world's most vulnerable and isolated peoples. Managing explosive growth and diminishing stocks of natural resources requires a new commitment to an international governance framework that addresses the plight of Indigenous Peoples—particularly their threatened commons, knowledge, and property rights. Different configurations of entities, coalitions, laws, and policy measures need to continue evolving towards more inclusive and effective governance systems.

B. ACCOUNTABILITY IN AN ARENA OF CORRUPTION AND RESOURCE COMPETITION

The fight against corruption can provide a lens on human history, the ongoing struggle for land and property rights, and the need to protect our commons as a crucial asset for all of humanity. Several thousand years of rising civilization appear to have done little to curb mankind's propensity for greed, dishonesty, and misuse of power or position. Corruption thrives when given an opening. Curbing corruption requires the institutional architecture, incentives, and laws to secure good governance.⁷⁷

Pervasive and insidious corruption, whenever it appears, undermines good governance. Corruption may be defined as "the abuse of public office for private gain," or as words or actions that affect an entrusted authority's judgment and action.⁷⁸ Like fraud, the benefit-seeking entity must deliberately intend to obtain illicit benefit.⁷⁹ Without leadership's integrity, the constituents' trust in the governance can plunge, possibly leading to a legitimation crisis for the administration.⁸⁰

77. See generally WORLD BANK, HELPING COUNTRIES COMBAT CORRUPTION: THE ROLE OF THE WORLD BANK (Sept. 1997), https://perma.cc/WD4Q-JLDQ.

78. See, e.g., id.; Michael V. Seitzinger, FOREIGN CORRUPT PRACTICES ACT (FCPA): CONGRESSIONAL INTEREST AND EXECUTIVE ENFORCEMENT, IN BRIEF 1, CONG. RES. SERV., 7-5700, R41466, Mar. 15, 2016, https://perma.cc/W5RB-DDSC ("Two provisions of the 1977 Act [15 U.S.C. §§78dd-1 and 78dd-2] made it a crime for any American business to use the mails or interstate commerce to offer or pay money or anything of value to a foreign official or to a foreign political party, party official, or candidate for foreign political office in order to influence the person in his decision making or to use his influence to assist the firm in obtaining or retaining business.").

79. *See*, *e.g.*, 15 U.S.C. §§78dd-1(a), §§78dd-2(a), §§78dd-3(a). *C.f.* Stichting Ter Behartiging Van de Belangen Van Oudaandeelhouders in Het Kapitaal Van Saybolt International B.V. v. Schreiber, 327 F.3d 173,183 (2d Cir. 2003) ("[T]he word 'corruptly' in the FCPA signifies, in addition to the element of 'general intent' present in most criminal statutes, a bad or wrongful purpose and an intent to influence a foreign official to misuse his official position. But there is nothing in that word or anything else in the FCPA that indicates that the government must establish that the defendant in fact knew that his or her conduct violated the FCPA to be guilty of such a violation.").

80. History of the Foreign Corrupt Practices Act, INT'L WHISTLEBLOWER & FOREIGN CORRUPT PRACTICES ACT, https://perma.cc/R447-S63G (last visited Mar. 21, 2020) (describing the background to passing Foreign Corrupt Practices Act: "FCPA was the first effort of any nation to specifically

^{169),} INT'L LABOUR ORG., https://perma.cc/WEN4-JD5P (last visited Apr. 10, 2020) (identifying ratifying member states as Argentina, Plurinational State of Bolivia, Brazil, Central African Republic, Chile, Colombia, Costa Rica, Denmark, Dominica, Ecuador, Fiji, Guatemala, Honduras, Luxembourg, Mexico, Nepal, Netherlands, Nicaragua, Norway, Paraguay, Peru, Spain, and Bolivarian Republic of Venezuela).

Leadership matters a lot; if the top rots, so too the body.⁸¹ This principle applies at the village level as well as corporate or capital headquarters. Commitment to good governance, accountability, transparency, and fairness helps eschew expectation and reliance on government patronage.⁸² However, the policymakers' incentives for re-election by extending such patronages can be hard to overcome.⁸³

The resource curse, also known as the paradox of plenty,⁸⁴ refers to a repeated pattern in international development. Countries rich in natural resources, which often harbor significant numbers of Indigenous Peoples, tend to eventually suffer. Their bounty exacerbates corruption by encouraging aggressive, extractive practices.⁸⁵ These conditions and associated "rent-seeking" collusion undermine traditional common property management systems and sustainable economies.⁸⁶

81. See, e.g., Donald R. Nelson & Timothy J. Finan, *Praying for Drought: Persistent Vulnerability* and the Politics of Patronage in Ceará, Northeast Brazil, AM. ANTHROPOLOGIST 302, 311 (2009) (reporting on how rain-fed farming in Ceará, Northeast Brazil, has been politically patronized despite indications of scarcer frequency and more variable amount of rainfalls in the region).

82. Id. at 312.

84. The Resource Curse: the Political and Economic Challenges of Natural Resource Wealth, NATURAL RES. GOVERNANCE INST. (Mar. 2015), https://perma.cc/4EMT-NGKY ("The resource curse [also known as the paradox of plenty] refers to the failure of many resource-rich countries to benefit fully from their natural resource wealth, and for governments in these countries to respond effectively to public welfare needs. While one might expect to see better development outcomes after countries discover natural resources, resource-rich countries tend to have higher rates of conflict and authoritarianism, and lower rates of economic stability and economic growth, compared to their nonresource-rich neighbors.").

85. Stewart M. Patrick, *Why Natural Resources Are a Curse on Developing Countries and How to Fix It*, THE ATLANTIC (Apr. 30, 2012), https://perma.cc/TJG4-2EH4 ("[Easy resource] revenues [from the bountiful natural resources] eliminate a critical link of accountability between government and citizens, by reducing incentives to tax other productive activity and use the revenue to deliver social services effectively. The same revenues also generate staggering wealth that facilitates corruption and patronage networks. Together, they consolidate the power of entrenched elites and regime supporters, sharpening income inequality and stifling political reform.").

86. Brenda L. Parlee, Avoiding the Resource Curse: Indigenous Communities and Canada's Oil Sands, 74 WORLD DEV. 425, 430–31 (Oct. 2015) (stating on the basis of various studies: "Empirical study of natural resource development economies reveal a consistent problem in the management of resource rents including inefficient management and allocation of resources[], bad economic decision-making[], rent-seeking behavior or corruptive economic practices [] and unsustainable levels of public spending[].").

criminalize the act of bribing foreign officials. The statute was enacted in the wake of the 'Watergate' scandal in the United States, which . . . resulted in a dramatic plunge in Americans' overall trust in government."). *See also Syria: The Story of the Conflict*, BBC (Mar. 11, 2016), https://perma.cc/VJE3-SVT5 ("Pro-democracy protests erupted in March 2011 in the southern city of Deraa after the arrest and torture of some teenagers who painted revolutionary slogans on a school wall. After security forces opened fire on demonstrators, killing several, more took to the streets.").

^{83.} *Id.* at 309, 311 (suggesting policymakers' disincentive to plan for occurrence of drought as it can foster the ongoing patronage between policymakers and constituents needs. Such conclusion is deducible from how families that are unfavorable to the local governments have harder time receiving resources, or from concerns of some civil servants that they can lose their positions in non-drought years). See also WORLD BANK, *supra* note 77, at 16 ("To the leadership the creation and allocation of state rents serves political purposes: rewarding supporters, buying off opponents, ensuring the backing of key groups, managing ethnic diversity, or simply accumulating resources to fight elections.").

Corrupt governments pressure local resource users to participate in a deeplyrooted system that is based on graft and informal economies of bribing government officials as well as skirting laws and regulations, and weak enforcement.⁸⁷

Issues related to property, wealth, and security garner extra human attention and importance.⁸⁸ These issues also generate bureaucracy and ultimately undermine the implementation of progressive laws and regulations. With so many departments and stakeholders responsible for various stages of land administration and adjudication, opportunities for mismanagement of information, corruption, and abuse abound.⁸⁹ In far too many cases, officials, bureaucrats, and well-connected elites involved in land administration take unfair advantage of these opportunities and unsurprisingly resist change and accountability.⁹⁰ While many do good and honorable work, too often they add unnecessary costs to real

89. *See*, *e.g.*, Gilbert, *supra* note 48, at 24–25 (noting that the India's Scheduled Tribes and Other Traditional Forest Dwellers [Recognition of Forest Rights] Act of 2006 recognizes Indigenous Peoples' individual and community land ownerships, but allow for the relevant decision-making or bureaucratic bodies to be slack in implementation, or processing their land claims due to "a complex and highly bureaucratic system of recognition." For example, a village assembly should pass "a resolution recommending whose rights to which resources should be recognized;" then, the resolution is "screened and approved at the level of the sub-division . . . and subsequently at the district level. The screening committee consists of three government officials [Forest, Revenue and Tribal Welfare departments] and three elected members of the local body at that level.").

90. *See, e.g., id.* at 20 ("As noted in an in-depth study on the situation of land grabbing in Kenya, led by the International Land Coalition (ILC) in 2011, land grabbing has been fueled by the 'disappearance' of large tracts of public land and the enormous wealth accumulated by elite members of Kenyan society. The study reveals that 'these allocations involve processes that range from the questionable to the blatantly fraudulent or illegal; these processes depend on the type of land targeted. Recurring characteristics are the abuse of public office and the manipulation of legal processes to obtain or allocate public land for personal gain or to ensure political patronage.").

^{87.} See, e.g., Kirk Talbott et al., A U.S. Asian-Pacific Pivot Point: Burma's Natural Resources, 4 PRISM, no. 3, 111, 112–115 (2013); WORLD BANK, supra note 77, at 9, 19 ("Bribes may be demanded or offered for the issuance of a license that conveys an exclusive right, such as a land development concession or the exploitation of a natural resource . . . When access to public goods and services requires a bribe, the poor may be excluded. Given their lack of political influence, the poor may even be asked to pay more than people with higher incomes.").

^{88.} Ross Marc Howard, *Interests and Identities in Natural Resources Conflicts Involving Indigenous Peoples*, CULTURAL SURVIVAL Q. MAG. (Sept. 1995) https://perma.cc/7T7N-3XVY ("[Helen Ross] wisely reminds us that "not all resource development issues proposed by non-Aborigines are negotiable" in describing resistance to mineral exploitation on sacred sites, an issue which has also emerged in the American southwest. Conflicts which involve core values and identity concerns (for at least one of the parties) Susskind and Cruikshank (1988) warn, are far less likely to be negotiable than conflicts primarily involving distributional matters. In these disputes the clash of world views can be so fundamental that the only settlement is sometimes one in which one side imposes its will on the other or withdraws."); Laura Notess, *For Indigenous Peoples, Losing Land Can Mean Losing Lives*, WORLD RESOURCES INST. (May 31, 2018), https://perma.cc/B2SW-59NT ("Communities rely on collective lands for agriculture, livestock grazing and water. Community lands provide key foods, such as fish, game, honey and edible plants, as well as medicinal herbs, fuel and building materials. When displaced communities lose access to these resources, they may have insufficient space for traditional agricultural or grazing practices, such as letting land lie fallow. The result is decreased food security and increased stress on water resources.").

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estate transactions or adjudication through "rent seeking"—these practices undermine good governance, performance, and trust.⁹¹

Indonesia provides a revealing case study in natural resource governance. Good governance and democracy require confidence and trust that winners will not use their powers to destroy the losers.⁹² Unfortunately, democracy itself does not guarantee good governance or sustainability. While Indonesia has enjoyed political opening and democratization, corruption has remained endemic and deeply rooted in the local and national political economy.⁹³ Traditional community-based management systems have been undermined by the "resource curse" and aggressive, extractive "rent seeking" collusion.⁹⁴ Local resource users from Sumatra to Irian Jaya often have little choice but to participate in a deeply rooted system based on graft and "informal economies" of paying off government officials and skirting laws and regulations.⁹⁵ International actors including timber, oil, gas, mining, and

93. Governance in Indonesia, INDONESIA-INVESTMENTS, https://perma.cc/HWF6-K9XC (last updated Dec. 23, 2016) ("Almost two decades after changing to a democratic system (which is a relatively short period), Indonesia managed to create a relatively strong democracy . . . There are fair and free elections every five years that determine the composition of the central government, local government, president, and local leaders. This system is further strengthened by well-developed local media institutions Other institutions, such as the Corruption Eradication Commission (KPK), also have a key role in terms of monitoring the quality of governance in Indonesia and have been granted a high degree of power to do so. Although all three branches seem to operate independently from each other, widespread corruption remains a big problem, especially within the parliament of Indonesia Corruption in the judicial branch is a problem as it jeopardizes the credibility of the courts and therefore undermines the attractiveness of the business and investment climate of Indonesia ").

94. See, e.g., OECD, CORRUPTION IN THE EXTRACTIVE VALUE CHAIN: TYPOLOGY OF RISKS, MITIGATION MEASURES AND INCENTIVES 32 (2016) ("The decision-making process may be influenced by political elites and private companies in order to maximise their benefits in the further development of the project. Finally, traditional leaders or members of local communities may receive bribes or extort money from companies in exchange for buying communities' consent, avoiding social tensions or acting in their capacity as landowners or custodians and giving their consent for companies to start operations.").

95. See, e.g., Charles Victor Barber & Kirk Talbott, *The Chainsaw and the Gun: The Role of the Military in Deforesting Indonesia*, 16 J. OF SUSTAINABLE FORESTRY, 131, 132, 140, 143 (2003).

^{91.} See, e.g., Kirk Talbott & Gabriel Thoumi, Common Ground: Balancing Rights and Responsibilities for Natural Resource Investment and Development, MONGABAY (Apr. 3, 2015), https://perma.cc/YEC5-DFVK.

^{92.} Martin Wolf, *Martin Wolf: Why Rigged Capitalism Is Damaging Liberal Democracy*, FINANCIAL TIMES (Sept. 18, 2019), https://perma.cc/9PBG-RLA3 ("Rentier capitalism" means an economy in which market and political power allows privileged individuals and businesses to extract a great deal of such rent from everybody else...[T]he notion that rising inequality and slow productivity growth are due to foreigners is simply false. Every western high-income country trades more with emerging and developing countries today than it did four decades ago. Yet increases in inequality have varied substantially. The outcome depended on how the institutions of the market economy behaved and on domestic policy choices... [R]ents are not merely being exploited. They are being created, through lobbying for distorting and unfair tax loopholes and against needed regulation of mergers, anticompetitive practices, financial misbehaviour, the environment and labour markets. Corporate lobbying overwhelms the interests of ordinary citizens...We need a dynamic capitalist economy that gives everybody a justified belief that they can share in the benefits.").

palm oil conglomerates have played a major role in unsustainable resource extraction that have negatively impacted local ecosystems and communities.⁹⁶

Professor Brown Weiss's insights shed light on how to ensure that local communities can have their voices heard. Her pioneering work with the World Bank Inspection Panel as well as her scholarship and teaching on the matter of accountability have advanced the theme of good global governance.⁹⁷ Professor Brown Weiss addresses a concern about how international law will lose legitimacy before the eyes of many in an increasingly kaleidoscopic world. She underscores the importance of holding accountable not only the states, but also non-governmental and private organizations. The international community must also apply principles of accountability to evaluate how an actor's decisions and actions affect others-partly through employing processes that require organizations "give satisfactory reasons" for their decisions and actions.⁹⁸ Professor Brown Weiss underscores that "transparency of the claims, process, reports, and findings" is essential to building shareholder trust, fighting corruption, and moving towards better governance of the commons.⁹⁹ Her forward-thinking and scholarly focus on ombudsmanship and inspection panels provides institutional "muscle" and vehicles for putting policy into practice for the benefit of current and future generations.100

^{96.} See, e.g., Gilbert, supra note 48, at 8, 11 (noting that, a forced displacement of the indigenous communities is on the rise globally, with accelerated acquisition of lands, especially by the foreign investors, for "large-scale development projects, the establishment of National Parks, conservation areas or game reserves, agro-investment projects, biofuel production, logging or extractive activities"); *id.* at 11 ("There is also a much more negative aspect of the definition of land grabbing as it refers to the fact that such large-scale acquisitions are undertaken with limited (if any) consultation of the local communities, limited (if any) compensation, and a lack of regard for environmental sustainability and equitable access to, or control over, water resources.").

^{97.} Biography of Edith B. Weiss, GEO. LAW, https://perma.cc/LH8C-YFNC ("In September 2002 she was appointed to a 5-year term on the 3-member Inspection Panel of the World Bank and from 2003-2007 served full-time as the Chairperson of the Inspection Panel, an appointment at the Vice-Presidential level."); Weiss, *supra* note 58, at 483–487 (2010) (describing aspects of World Bank that contributes to holding World Bank accountable to truly serve the beneficiaries of its interests).

^{98.} Weiss, supra note 59, at 24, 26.

^{99.} Weiss, *supra* note 58, at 488–90 ("Ensuring transparency of the claims, process, reports, and findings is essential for instilling trust in the system. Transparency allows everyone to identify any mistakes in the findings and to have confidence in them Having a process for holding management and staff accountable minimizes the chance that those harmed will be overlooked. It can also lead to broader acceptance for risky but necessary activities.").

^{100.} See *e.g.*, *id.* at 487 (describing the lessons of accountability she gained at the Inspection Panel); Edith B. Weiss, *Intergenerational Equity: a Legal Framework for Global Environmental Change, in* ENVIRONMENTAL CHANGE AND INTERNATIONAL LAW: NEW CHALLENGES AND DIMENSIONS 17 (UN U. Press 1992), (suggesting ways that that the future generations' interests are considered and accounted for, such as setting a public office acting as a guardian *ad litem*, designating an ombudsman, or appointing commissioners at the international, national, or local level as necessary); Edith Brown Weiss, *Bottom Up Accountability*, 37 ENVTL. POL'Y & L. 259, 259 (2007) (noting worldwide increase in ensuring bottom up accountability, or, creating offices that receive complaints from the stakeholders to hold accountable the decisionmakers).

Consistent with Professor Brown Weiss's vision for ensuring that decisionmakers are accountable to the local communities, the relatively new Extractive Industries Transparency Initiative ("EITI") standard offers promise in reversing these unsustainable trends. EITI promotes best industry practices, information sharing, and stakeholder inclusion in planning and project development for oil, gas, and mineral resources. Countries that are parties to the EITI standards pledge to promote an "open and accountable management" of natural resources.¹⁰¹ EITI members are required to develop institutional and financial frameworks incorporating principles of transparency, oversight, and accountability. Multiple stakeholders oversee "information along the extractive industry value chain from the point of extraction, to how the revenue makes its way through the government, to how it benefits the public."¹⁰² The EITI stands as an evolving and timely institutional development in line with Professor Brown Weiss's pathfinding in building legal and institutional architecture that supports good governance of our planet's ecosystems and resources.

$C. \ \mbox{indigenous peoples} \ \mbox{and the struggle for resource governance}$

Bureaucracies and stakeholders are often resistant to change. Understanding the obstacles posed by this resistance proves essential to informing and strengthening land reform efforts.¹⁰³ Corruption and bureaucratic obstacles have long plagued institutions attempting to determine rights and responsibilities of using, owning, and selling land and property (including natural resources such as forests, water and minerals).¹⁰⁴ A common impediment to land titling and community ownership or usufruct rights rests with the relatively high quality and quantity of land parcel documentation that government authorities require.¹⁰⁵ Implementing new land administration programs within the context of a multilayered, paper-based tax collection and titling system involves a great deal of

^{101.} Joaquin Vallejo, *No Silver Bullet: the EITI's Challenge to Improve Transparency in Extractive Industries*, PAN AM. DEV. FOUND. (Jul. 10, 2019), https://perma.cc/2YKC-JCU7 (noting that 52 countries were implementing the EITI as of July 10, 2019).

^{102.} *About EITI*, THE GOV'T OF THE REPUBLIC OF ARM., https://perma.cc/Z4SY-JA49 (last visited Mar. 21, 2020). *See also* EXTRACTIVE INDUSTRIES TRANSPARENCY INITIATIVE, THE EITI STANDARD 2019 70 (2019), https://perma.cc/WNV3-6D3E.

^{103.} See generally SILVANA BALDOVINO, UNA PRIMERA MIRADA: SITUACIÓN LEGAL DE LA TENENCIA DE TIERRAS RURALES EN EL PERÚ (2016), https://perma.cc/4YBG-52J8.

^{104.} See, e.g., HUMAN RIGHTS WATCH, supra note 52, at 22.

^{105.} See, e.g., Gilbert, supra note 48. See generally Tom Wilberforce Archer, Investigating the Impact of Social Tenure Domain Model (STDM) on Tenure Security 2, 9, 13 (Mar. 2016) (unpublished M.S. thesis, University of Twente) (referring to IAN WILLIAMSON ET AL., LAND ADMINISTRATION FOR SUSTAINABLE DEVELOPMENT (2010) that "[c]onventional land administration system involves the use of cadastre, an information system made up of interests and geometric description of land" and explaining that such formal land administration system which awards land title to individuals upon privatization is generally not accommodating of individuals' land right claims arising out of rural customs—such that "only certain segments of society, usually the rich and well-connected" can use it).

time and cost.¹⁰⁶ Politicians can create regulations and procedures that erect obstacles—administrative dismantling of law.¹⁰⁷ Registration deadlines, court appearance dates, and legally binding agreements, including community leases, housing mortgages, and titles, can easily be misunderstood or misrepresented due to illiteracy, lack of access to information, and manipulation by unsavory actors.¹⁰⁸ The more remote the populations impacted, the less likely they will have the knowledge and resources to navigate the system.¹⁰⁹ Disputed land claims and property boundaries, isolation, lack of access to information, and confusion and fear of engaging in formal land administration processes all exacerbate poverty. In most of the global south, the presumption of state control and eminent domain combined with centuries of usurpation of indigenous and customary land rights weighs against the poor.¹¹⁰ Difficult under the best of circumstances, the emotion attached to matters of land and property exacerbates conflicts and makes for a formidable challenge.¹¹¹

108. Post-2015 Agenda: Indigenous Peoples and the Post-2015 Development Agenda, U.N. DEP'T ECONOMIC & SOC. AFF., https://perma.cc/9BET-EYW4 (last visited Mar. 24, 2020) (emphasizing the need for free, prior, and informed consent, noting especially that "Indigenous face systemic discrimination and exclusion from political and economic power; they continue to be over-represented among the poorest, the illiterate, the destitute; they are displaced by wars and environmental disasters; indigenous peoples are dispossessed of their ancestral lands and deprived of their resources for survival, both physical and cultural; they are even robbed of their very right to life."). See also INTER-AM. COMM'N ON HUMAN RIGHTS, supra note 57, no. 220 (noting that Indigenous peoples are part of those who isolate themselves as a survival strategy, and can be "unfamiliar with the ways in which mainstream society functions Their vulnerability is even further aggravated by the human rights violations which they often suffer at the hands of those who seek to exploit the natural resources in their territories and by the fact that aggression against these peoples and their ecosystems generally goes unpunished.").

109. INTER-AM. COMM'N ON HUMAN RIGHTS, supra note 57, no. 220.

110. See, e.g., UN HUMAN SETTLEMENTS PROGRAMME, HANDBOOK ON BEST PRACTICES, SECURITY OF TENURE AND ACCESS TO LAND – IMPLEMENTATION OF THE HABITAT AGENDA 10, 13–14 (2003), https://perma.cc/H6MY-5VYK ("A common problem, especially where the land has been nationalized, is where the state allocates land and/or land use rights to developers even though the land is already occupied, often by low- income people. Mekvichai states that in Thailand unregistered state land in the urban areas is often encroached on by leading business families, who appear to have collaborated with the provincial officials;" referring to Imparato's finding that Brazil's Constitutional support for squatters' tenure security was insufficient for the lack of special procedures for the squatters—i.e. using other forms of adverse possession translated to costly and time-consuming court procedures; recommending that squatters' adverse possession has to be supported by "special regulations and procedures that are not costly for low-income people;" suggesting that squatters' adverse possession rights can be "strengthened by allowing class actions to go to court [and] by a justice system allowing paralegals trained in property and inheritance to supply legal aid to low-income groups").

111. See also INTER-AM. COMM'N ON HUMAN RIGHTS, supra note 57, no. 142 (noting that Indigenous peoples are part of those who isolate themselves as a survival strategy, and can be "unfamiliar." "Recognition of the close material and cultural link between indigenous peoples and their traditional territories is a fundamental factor for the determination of rights in cases of property conflicts with third parties, in which States must consider the implications of indigenous peoples' territorial rights for their cultural identity and material survival Thus, in the Moiwana case, the Court held that the

^{106.} Archer, supra note 105, at 2.

^{107.} See generally DISMANTLING PUBLIC POLICY: PREFERENCES, STRATEGIES, AND EFFECTS 210 (Michael W. Bauer et al. eds., 2012).

Disparity between the politically and economically connected elites and the poor generates political and social tensions in Africa, Latin America, and Asia. A rising tide of rural migrants streaming into swelling urban areas reflects increasing demographic, social, and political instability. Over three million people move into crowded cities every week.¹¹² India's population has more than tripled since 1940 to 1.3 billion people today.¹¹³ Additionally, Nigeria, one tenth the size of the U.S., has grown from forty-five million people in 1960 to over 195 million today, with 400 million projected in less than thirty years.¹¹⁴

Economist Hernando de Soto estimates that two thirds of the world's population largely urban—lack access to a formal system of property rights and protections.¹¹⁵ The majority of urban and rural properties are not mapped or registered. In India, for example, new geospatial technology recently identified 500,000 inhabitants of a slum that were not officially recognized in government maps or registries.¹¹⁶ Rural communities who have rights to their own forests under

114. Nigeria Facts, WORLD ATLAS, https://perma.cc/8ZE5-3ZNM (last visited Mar. 24, 2020) (noting the total area of sovereignty as 923,768 km²); United States of America, WORLD ATLAS, https://perma.cc/XDA4-N3U2 (last visited Mar. 24, 2020) (noting the total area of sovereignty as 9,833, 517km²); Nigeria, WORLD BANK, https://perma.cc/L2GN-DZ4Z (last visited Apr. 10, 2020) (estimating the population of Nigeria as having reached 45,138,458 in the 1960 and 195,874,740 by 2018); UNITED NATIONS, WORLD POPULATION PROSPECTS 12 (2019), ST/ESA/SER.A/423, https://perma.cc/CG7A-H572 ("India is expected to add nearly 273 million people between 2019 and 2050, while the population of Nigeria is projected to grow by 200 million. Together, these two countries could account for 23 per cent of the global population increase to 2050."); U.S. Projected to Remain World's Third Most Populous Country Through 2050, Census Bureau Reports, U.S. CENSUS BUREAU (Jun. 27, 2011), https://perma.cc/ZV5B-S4DJ ("Nigeria also has a relatively high estimated fertility rate of 5.7 and is projected to more than double its population by 2050 from 166 million to 402 million.").

115. Phil Gramm & Hernando de Soto, *How Blockchain Can End Poverty*, WALL ST. J. (Jan. 25, 2018), https://perma.cc/XHQ4-RA23 ("The Institute for Liberty and Democracy, founded by Hernando de Soto in 1979, estimates that two-thirds of the world's population lacks access to a formal system of property rights, resulting in undeveloped resources and assets worth an estimated \$170 trillion, or 63% of the value of the assets of the U.S.").

116. J. Michael Graglia & Christopher Mellon, *Blockchain and Property in 2018: at the End of the Beginning, Land Governance in an Interconnected World*, ANN. WORLD BANK CONF. ON LAND & POVERTY, Washington D.C., Mar. 19–23, 2018 (quoting Peter Rabley of Omidyar Network that the problem with land registries is not about lack of technology but mapping of areas where people are living: "In India, they used geospatial technology to uncover 500,000 inhabitants of a slum that previously nobody knew about. Once we've been able to identify where people are living that they have property rights.").

community's forced displacement had hurt its members in emotional, spiritual, cultural and economic terms, and considered this fact relevant for the calculation of the indemnity for the immaterial damage that the State had to repair.").

^{112.} Michael Collyer, "Three Million People Move to Cities Every Week": So How Can Cities Plan for Migrants?, CITY METRIC (Dec. 3, 2015), https://perma.cc/DZ95-6MBG.

^{113.} Population, total, WORLD BANK, https://perma.cc/X2DV-BNYF (last visited Mar. 24, 2020) (estimating India's total population as 450,547,679 in 1960, and as 1.353 billion in 2018). In 2001, rural to urban migrants were 52 million out of India's 1.02 billion population, while in 2011, rural to urban migrants have risen to 78 million, an increase of 51% from 2001 to 2011, according to census analysis of the Government of India. OFFICE OF REGISTRAR GENERAL & CENSUS COMMISSIONER, MINISTRY OF HOME AFFAIRS, GOVERNMENT OF INDIA, MIGRATION (2001), https://perma.cc/5BXD-HCQL.

India's Forest Rights Act are still struggling to register those rights despite the existence of the law.¹¹⁷

In sum, Professor Brown Weiss observes a need to reduce friction between the various elements of the "kaleidoscope" in order to build and sustain good governance of the global environment for future generations. She appreciates that protecting Indigenous Peoples' rights, including the right to govern their environment, is a key element for success. She advocates that international and national law must enable these local stewards to perform their functions without being disrupted by friction with more powerful elements, especially during turbulent times.

II. Emerging Paths Implementing Edith Brown Weiss's vision of the Kaleidoscope

A. EDITH BROWN WEISS'S WORK VIEWED IN THE CONTEXT OF FIFTY YEARS OF GLOBAL ENVIRONMENTAL CHANGE

Arnold Toynbee argued in *A Study of History* that civilization can be seen "as a response to a challenge in a situation of special difficulty which rouses . . . unprecedented effort."¹¹⁸ Our man-made climate change crisis presents such an unprecedented challenge. Our air, water, soil, and human lives suffer from pollution and often harmful consequences of largely unrestrained industrialization and development. To turn the corner towards ecological health, we must make a commensurate, unprecedented effort.

Rachel Carson's 1962 landmark book on DDT, *Silent Spring*, helped spark the environmental movement in the United States and beyond.¹¹⁹ The first Earth Day in 1970 signalled a new popular awareness of ecology.¹²⁰ People knew trouble

120. Andrew Glass, *First Earth Day celebrated April 22, 1970*, POLITICO (Apr. 22, 2008), https://perma.cc/PX6P-JRDV ("On this day in 1970, Earth Day, an event aimed at raising public awareness of

^{117.} See generally Jocelyn I. Lee & Steven A. Wolf, Critical Assessment of Implementation of the Forest Rights Act of India, 79 LAND USE POL'Y 834, 834–44 (2018).

^{118.} Arnold J. Toynbee, 1 A STUDY OF HIST. 570 (1946).

^{119.} Legacy of Rachel Carson's Silent Spring, AM. CHEMICAL SOC'Y, https://perma.cc/LD2Q-LVWS (last visited Nov. 6, 2019) ("Rachel Carson's Silent Spring, published in 1962, was a landmark in the development of the modern environmental movement. Carson's scientific perspective and rigor created a work of substantial depth and credibility that sparked widespread debate within the scientific community and the broader public about the effect of pesticides on the natural world. These discussions led to new policies that protect our air, our water, and, ultimately, our health and safety."); *Rachel Carson's Silent Spring, the "Iconic Piece of Literature" that Changed the Way We Think of the World*, LIBRARY OF AMERICA (Apr. 20, 2018), https://perma.cc/3BQC-A2CH (quoting Sandra Steingraber, a Distinguished Scholar in Residence at Ithaca College, that Carson "defend[ed] her conclusions against her enemies in industry who sought to discredit the science that she had compiled—and, more viciously, Carson herself as a messenger of that science."); *The Story of Silent Spring*, NRDC (Aug. 13, 2015), https://perma.cc/LY2C-P8AD ("Rachel Carson's Silent Spring, which in 1962 exposed the hazards of the pesticide DDT . . . [created a legacy of] a new public awareness that nature was vulnerable to human intervention. . . . For the first time, the need to regulate industry in order to protect the environment became widely accepted, and environmentalism was born.").

brewed with the ozone hole, air and water pollution, worldwide forest degradation, and habitat loss for biodiversity. But most thought any doomsday scenario stretched out past 100 years and into science fiction. Within the last ten years, the Intergovernmental Panel on Climate Change ("IPCC"), the world authoritative body on the science of atmospheric, ocean and climate change, has provided increasingly disturbing reports.¹²¹ Irrefutably, we now witness accelerated melting of both Arctic and Antarctic ice caps, sea level rise and pollution of warming oceans, and disturbing patterns of more destructive climate changes, including fire and drought.¹²² Our planet's fragile web of life appears threatened by human activity on one hand and our inaction on another.¹²³ While sounding a clarion bell

121. Fiona Harvey, *How the UN Climate Panel Got to 1.5C Threshold – Timeline*, THE GUARDIAN (Oct. 7, 2018), https://perma.cc/L2J7-H5PU (summarizing events relevant to IPCC reports. The First Assessment in 1990 "shows the climate changes partly owing to natural variability, but that greenhouse gas emissions from human activity play a role, and predicts temperature rises of 0.3C a decade in the 21st century, higher than seen in 10,000 years, and sea level rises of 60cm by 2100." The Second Assessment in 1995 reports that "carbon dioxide is the main contributor to warming, and that human actions increasing carbon concentrations in the atmosphere could alter the climate irreversibly." The Third Assessment in 2001 demonstrates that "the world has warmed by 0.6C compared with pre-industrial levels, and in the last 50 years this was mainly due to human activity. The report predicts temperature rises of between 1.4C and 5.8C by 2100, and sea level rises of 0.1 to 0.9 metres." The Fourth Assessment demonstrates that "warming is 'unequivocal' with more than 90% certainty that this comes from human activity" and "human-induced warming of about 2C above pre-industrial levels is adopted as the threshold of safety [on] curbing greenhouse gas emissions." The Fifth Assessment published in stages through 2013-2014 "showing [that] the 2C threshold will be breached within 30 years without urgent action to reduce greenhouse gas emissions.").

122. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, THE OCEAN AND CRYOSPHERE IN A CHANGING CLIMATE: SUMMARY FOR POLICYMAKERS, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, SPM-10 (H.-O. Pörtner et al. eds., 2019), https://perma.cc/DKV6-A4U2 ("Global mean sea level . . . is rising, with acceleration in recent decades due to increasing rates of ice loss from the Greenland and Antarctic ice sheets [very high confidence], as well as continued glacier mass loss and ocean thermal expansion. It is virtually certain that the global ocean has warmed unabated since 1970 and has taken up more than 90% of the excess heat in the climate system [high confidence]. Since 1993, the rate of ocean warming has more than doubled [likely]. Marine heatwaves have very likely doubled in frequency since 1982 and are increasing in intensity [very high confidence]. By absorbing more CO2, the ocean has undergone increasing surface acidification [virtually certain]. A loss of oxygen has occurred from the surface to 1000m [medium confidence]."); 3-4 ("Area burned and frequency of fires [including extreme fires] are unprecedented over the last 10,000 years [high confidence].").

123. In 2000, Bill Joy, cofounder of Sun Microsystems, predicted a nightmare scenario within a half century. He described rapid advances in nanotechnology, genetics, robotics, and warfare, resulting in devastating harm (both intentional and accidental) to civilization. He considered the chilling possibility of a "White Plague" created through genetic manipulation or nanotechnology running amok, "possibly turning the biosphere into dust in a matter of days." *See* KEN WILBER, THEORY OF EVERYTHING 104 (2000). One wonders at the fate of the human race today as miles-long trains of coal depart several times

environmental issues, was celebrated for the first time. Millions of Americans participated in rallies, marches and educational programs to mark the day. As a result, 'environment' became a household word, one often seen and heard in the news. Sen. Gaylord Nelson [D-Wis.] [1916-2005], a staunch environmental advocate, promoted the teach-in project, hoping to unify the environmental movement and increase ecological awareness throughout the nation. 'It was a gamble,' Nelson recalled, 'but it worked. The objective was to get a nationwide demonstration of concern for the environment so large that it would shake the political establishment out of its lethargy and, finally, force this issue permanently onto the national political agenda.'").

for decades, Professor Brown Weiss points towards a viable pathway centered on good governance and evolving, resilient international law.

Needed today more than ever, hope for our ecology rests on improved governance of resources, property rights, and protecting the most vulnerable amongst us. Professor Brown Weiss's stellar career trajectory from Harvard and Princeton, Berkeley and Georgetown, the World Bank and the Hague reflects the remarkable contribution she has made in international environmental law over a half century. Her groundbreaking contributions in deepening the scholarship and understanding of accountability, governance, and intergenerational equity have helped set a path forward towards a holistic ecology. Professor Brown Weiss provides clear perspective and consistency in her scholarship related to good governance. With sophistication, she analyzes a kaleidoscopic world of competing perspectives and constant change.

The remarkable new confluence of overlapping laws, institutions, and initiatives adds up to less than the sum of its parts, however.

In a climate in which national governments exercise less, not more, ability to regulate financial flows and [corporate operations] . . . , this proliferation of laws and lawlike principles creates a set of shifting authority structures and subjective norms. Without clear directives as to how and when they are to be implemented, more mechanisms for accountability have only added to the confusion, creating a haphazard collection of lawlike artifices that ultimately amount to a Rorschach 'inkblot' test of social responsibility, in which the meaning of laws shifts according to the onlooker's subjective perception.¹²⁴

Professor Brown Weiss, on the other hand, has adhered to the bedrock principles of good governance and intergenerational equity. She does not further complicate an already complex, often contradictory arena of law and policy. Her work on accountability and stakeholder inclusion at the Hague, World Bank Inspection Panel, and elsewhere has provided substance to theory and application to the law. In that regard, we offer a few examples of promising new initiatives in strengthening Indigenous Peoples' property rights and community-based resource governance that follow Professor Brown Weiss's principles and pathway.

a day from Wyoming's Powder Basin for West Coast ports and China. See Gary Braasch & Joan Rothlein, In Wyoming's Powder River Basin, the Old Oregon Trail Has Become the Railroad Route for Millions of Tons of Coal, WORLD VIEW OF GLOBAL WARMING, https://perma.cc/H44S-LZQX (last visited Mar. 4, 2020).

^{124.} Amanda M. Fulmer et al., *Indigenous Rights, Resistance, and the Law: Lessons from a Guatemalan Mine*, 50 LATIN AM. POL. & SOC'Y 91, 92 (2008).

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B. INNOVATIVE INSTITUTIONS EMERGING TO MAKE THE GLOBAL KALEIDOSCOPE OPERATIONAL: THE TENURE FACILITY

The international and domestic legal architecture to support globally-recognized rights and intergenerational equity has been progressively strengthened over the past twenty-five years, following the beacon created by Professor Brown Weiss's vision of intergenerational equity in a kaleidoscopic world. International courts and human rights commissions have created a body of international law through jurisprudence, which guides national governments to reform their practices and law.¹²⁵ The United Nations Human Rights Council establishes Special Rapporteurs to act independently and monitor governments and investigate particular issues under international law. The Special Rapporteur on the Rights of Indigenous Peoples was established in 2001.¹²⁶ Additionally, the Council established a Special Rapporteur on the Environment in 2012¹²⁷ to pursue national governments' accountability for protecting rights under international law.

While international law provides the basis for recognizing and protecting Indigenous Peoples' property rights and resource governance with or without national law, national government support remains essential to achieving accountability and the full exercise of those rights. The international legal and policy architecture alone proves insufficient because governments require accountability and funding mechanisms to implement progressive legal change. Without the political will and necessary commitment from national governments and civil society, little can be implemented and enforced. So far, limited grant and loan funds have been directed to securing indigenous land rights, but greater efforts are being made to protect Indigenous Peoples' property rights. The World Bank initiated its Dedicated Grant Mechanism ("DGM") for Indigenous Peoples and Local Communities, for example, as a climate finance mechanism for building local organizational capacity to implement small projects (\$10,000-50,000).¹²⁸ Having reached its fourth year of implementation in 2019, DGM underlined the important roles that these communities could play in climate finance.¹²⁹ Some regional international development banks have also provided loans with components to support indigenous land rights in particular countries.

^{125.} See, e.g., INTER-AM. COMM'N ON HUMAN RIGHTS, supra note 57; Peter Bille Larsen, The 'New Jungle Law': Development, Indigenous Rights and ILO Convention 169 in Latin America, 7.1 INT'L DEVELOPMENT POL'Y, ¶14 (2016); Fergus MacKay, Indigenous Peoples Rights and Conservation: Recent Developments in Human Rights Jurisprudence, FOREST PEOPLES PROGRAMME (Nov. 29, 2017), https://perma.cc/V7AM-KP2Y.

^{126.} Special Rapporteur on the Rights of Indigenous Peoples, OFF. OF THE U.N. HIGH COMMISSIONER FOR HUMAN RIGHTS, https://perma.cc/EE5L-Q2G7 (last visited Apr. 10, 2020).

^{127.} Special Rapporteur on Human Rights and the Environment, OFF. OF THE U.N. HIGH COMMISSIONER FOR HUMAN RIGHTS, https://perma.cc/KQ86-XKZ8 (last visited Apr. 10, 2020).

^{128.} Mark Camp, World Bank to Fund Grants Facility for Indigenous Peoples, CULTURAL SURVIVAL (Sept. 2003), https://perma.cc/V3MU-UG6N.

^{129.} World Bank, The Dedicated Grant Mechanism for Indigenous Peoples & Local Communities 2019 Annual Report 32 (2019).

For instance, in 2014, the Inter-American Development Bank lent funds to Peru for titling lands, including indigenous territories in Peru's Amazonian region.¹³⁰ In addition, the World Bank's Forest Investment Program designated additional funds for titling indigenous lands in 2013.¹³¹ Ombudsman mechanisms have also held the international lending agencies accountable to international law. For example, the International Finance Corporation's ("IFC") Compliance Advisor Ombudsman found the IFC negligent in 2017 for providing a 2013 loan to a company that seized community lands for plantations in Cambodia and ordered IFC to finance the return of those lands.¹³²

Until 2017, the extensive global funding architecture lacked any international financial entity dedicated to help Indigenous Peoples work with national governments to implement national laws. The establishment of The International Land and Forest Tenure Facility ("Tenure Facility") in Stockholm, Sweden filled this gap.¹³³ The new Tenure Facility, led by Filipina international lawyer Antoinette Royo, holds a strong Board including indigenous leaders from Asia, Africa, and Latin America.¹³⁴ The creation of the Tenure Facility fulfilled an international

132. Rina Chandran, *Cambodia Returns Land Taken from Indigenous People in 'Unprecedented' Move*, THOMSON REUTERS FOUND. NEWS (Mar. 27, 2019), https://perma.cc/V9GH-8W8Q ("Ten years ago, the [Cambodian] government gave about 19,000 hectares (73 sq. miles) of land belonging to 12 indigenous villages to Vietnamese rubber growers Hoang Anh Gia Lai (HAGL). The indigenous communities filed a complaint in 2014 over 'serious' environmental and social effects with the World Bank's International Finance Corporation (IFC), which had invested in a fund that financed HAGL's ventures in Cambodia and Laos."); *Cambodian Indigenous Communities Win Back Their Sacred Land from Vietnamese Rubber Developer*, INCLUSIVE DEV. INT'L (Mar. 26, 2019), https://perma.cc/E33Q-MSXS (reporting that the Indigenous Peoples' lands were returned without restoration and compensation despite the land deterioration due to HAGL's activities); *Cambodia: Hoang Anh Gia Lai Rubber Plantations*, INCLUSIVE DEV. INT'L, https://perma.cc/RH44-F9UX (last visited Mar. 10, 2020) (providing links to complaints that indigenous communities in Ratanakiri province filed to the CAO for IFC's funding of Vietnamese financial institutions that funded HAGL's land-grabbing activities without proper consultation nor risk assessments).

133. About Tenure Facility, THE TENURE FACILITY, https://perma.cc/5729-HXTF (last visited Mar. 10, 2020) ("The International Land and Forest Tenure Facility is the first and only international, multistakeholder financial mechanism exclusively focused on securing land and forest rights for Indigenous Peoples and local communities. It provides grants to implement tenure rights under existing law and policy and shares the knowledge, innovations and tools that emerge. Launched in 2014 by the Rights and Resources Initiative (RRI), the Tenure Facility is dedicated to scaling up recognition of collective land and forest rights globally. This helps reduce conflict and further the achievement of global human rights, environment, and development goals. The Tenure Facility is an international foundation registered in Sweden.").

^{130.} Peru to Improve Rural Land Registration and Titling with an IDB Loan, INTER-AM. DEV. BANK (Dec. 4, 2014), https://perma.cc/T7Q8-CFKG.

^{131. 14,5} Million USD Designated to the Establishment and Management of Indigenous Territories in Peru, NORAD (Aug. 14, 2014), https://perma.cc/Z982-ZMA2.

^{134.} *Id.* ("The Tenure Facility is governed by a Board of Directors that determines its strategy and direction. It also benefits from the expertise and influence of an international multi-stakeholder Advisory Group, which advises on program design and shares knowledge and learning. Both bodies have strong representation from Indigenous Peoples' organizations."); *Board of Directors*, THE TENURE FACILITY, https://perma.cc/BZ2Q-8QN9 (last visited Dec. 13, 2019) (describing the Board of Directors' diverse backgrounds); *Nonette Royo*, GLOBAL LANDSCAPES F., https://perma.cc/SG5U-NM3Q (last visited Dec.

demand from indigenous leaders.¹³⁵ The Tenure Facility demonstrates how new global institutions can strengthen the linkages between international legal and financial architecture and civil society movements.¹³⁶ Through its financing, the Tenure Facility brings Indigenous leaders into position to leverage new kaleido-scopic connections between global entities like IFC, national agencies, and local Indigenous Peoples' organizations.

In a few short years, the Tenure Facility has already brought national governments' actions into line with international law by working directly with Indigenous Peoples to address institutional problems and legal challenges associated with securing land and forest tenure. For example, in Peru, the Tenure Facility has supported a Peruvian legal non-governmental organization— Sociedad Peruana de Derecho Ambiental, or "SPDA"—which works with Indigenous Peoples' organizations and Peruvian national and sub-regional government agencies to implement national law to title lands long claimed by Peruvian indigenous communities.¹³⁷ In a few short years, the Tenure Facility support has leveraged greater results from the Inter-American Development Bank and German government's existing investments in land titling, including an additional 600,000 hectares of Peruvian tropical forest titled to indigenous communities, and strengthened government capacity to implement law.¹³⁸ The Tenure Facility support has further strengthened the protection of 2.4 million

^{13, 2019) (}describing her position as the Executive Director and her background as "lawyer, activist, and author, specializing in the land rights of Indigenous Peoples and community-based natural resource management.").

^{135.} THE TENURE FACILITY, *supra* note 133 ("The Tenure Facility works directly with the Indigenous Peoples and local communities and their allies that are leading the struggle to ensure laws on community rights are translated into rights recognition on the ground. It supports them to achieve formal legal recognition of their land and forest rights on maps, in laws, and in the plans and operations of governments and private investors. It works strategically with local, national, and international stakeholders to foster community-level partnership and joint action with governments and the private sector. The Tenure Facility generally operates within, or seeks to improve, existing government structures to ensure communities can assert their rights to the land they have maintained for generations. It works top-down to disseminate successful approaches and bottom-up to test tools at the local level and across cultures and ecosystems.").

^{136.} See THE TENURE FACILITY, *supra* note 133 ("[N]one provide the flexible and direct financial support to Indigenous Peoples and local organizations required to respond at the speed and scale necessary to secure the lives of the millions of people and hectares of forest that are at immediate risk. Moreover, there is no other international organization dedicated solely to financing projects to recognize Indigenous Peoples' and local communities' land rights on the ground. The unmet demand for financial and technical assistance hinders progress on human rights, sustainable development, agriculture, forest conservation, and climate change The Tenure Facility supports Indigenous Peoples, civil society organizations, and government institutions.").

^{137.} *Results and Impact*, THE TENURE FACILITY, https://perma.cc/WLW2-4ZHF (last visited Dec. 13, 2019).

^{138. 650,000} More Hectares Titled in the Peruvian Amazon, THE TENURE FACILITY, https://perma. cc/BW7B-M3AL (last visited Dec. 13, 2019).

hectares of forest reserves designated for uncontacted Indigenous Peoples in Peru.¹³⁹ The challenge is to complete the titling of approximately 650 Peruvian indigenous communities still seeking titles and to secure long-term defense of titleholders' rights by Peru's Public Defender (Defensor del Pueblo) by 2021.¹⁴⁰ The Tenure Facility exemplifies an institution that followed Professor Brown Weiss's vision to build the architectural foundations of good governance for our global kaleidoscope, particularly for marginalized parties including Indigenous Peoples.

C. NEW APPROACHES AND TECHNOLOGIES TO STRENGTHEN LOCAL–GLOBAL ARCHITECTURAL CONNECTIONS

The progress of digital technologies over the past twenty years, especially in satellite based Global Positioning Systems ("GPS") has opened new paths for achieving national law to protect indigenous rights. GPS has helped democratize the mapping process, allowing individuals and communities to produce thousands of small-scale maps, local land use plans, topographical charts, and other documents rich with local information. Many of these maps, however, are of limited use for engaging with governments or private companies because most maps are not publicly shared, and when they are, they lack the necessary data standards and requirements to integrate with national land information systems.¹⁴¹ Land tenure and natural resource rights of use, access, and ownership remain weak. Securing tenure and protecting property rights largely hinges on providing evidence, and maps can help tremendously.

One of the leading countries taking action on indigenous land rights, the Philippines, drafted a national law recognizing Filipino indigenous communities' rights (Indigenous Peoples Rights Act, "IPRA") in the 1980s.¹⁴² But it was only with access to technically-advanced "differential GPS" in the early 1990s that Indigenous Peoples could meet their government's technical demands for making

^{139.} THE TENURE FACILITY, *supra* note 137. For international interpretation of uncontacted peoples' rights, *see* INTER-AM. COMM'N ON HUMAN RIGHTS, INDIGENOUS PEOPLES IN VOLUNTARY ISOLATION AND INITIAL CONTACT IN THE AMERICAS: RECOMMENDATIONS FOR THE FULL RESPECT OF THEIR HUMAN RIGHTS (2013), OEA/Ser.L/V/II. Doc. 47/13, https://perma.cc/F4HP-JF78.

^{140.} Katherine Sánchez, *El Camino Hacia la Titulación: Pasos Clave para Avanzar*, SPDA ACTUALIDAD AMBIENTAL (Dec. 2, 2019), https://perma.cc/K8R2-K7ET.

^{141.} Not all community mapping has been done without attention to the larger government system. For example, the mapping of land rights claims by PAFID in Philippines in the early 1990s followed the mapping protocols and claim procedure laid out by the Philippine government. Thus, all the community claim maps fit into a national Philippines system. After community claims over 1 million hectares were submitted, the Indigenous Peoples Rights Act (IPRA) recognizing those land rights was passed. *See* Alcorn, *supra* note 53.

^{142.} Bong Santisteban, *How Did the Indigenous Peoples' Rights Act Help Empower the Community?*, RAPPLER (Oct. 17, 2017), https://perma.cc/AB7Q-TSZ9 (quoting Justin Marvic Leonen, an expert on law concerning Indigenous Peoples' rights: "the 9-year fight to pass IPRA – the bill [] first filed in the Senate in 1987 – was a collective effort of advocates who called for respect for ethnic tribes' ancestral domain.").

territorial claims. With the new technology, indigenous communities in the Philippines were able to map and submit claims for over one million hectares of territory as Ancestral Domains, including land and sea. The maps established formal claims over a large area, building immense pressure for a law clarifying rights over Ancestral Domains, and IPRA was signed into law in 1997.¹⁴³ The Supreme Court subsequently upheld the IPRA as consistent with the Philippines Constitution.¹⁴⁴ While other countries, such as Peru, have legislation and policy to protect indigenous land rights,¹⁴⁵ the Philippine IPRA continues to serve as the beacon for the highest level of resource rights that indigenous communities have achieved in any country in the world. Around the world, the majority of Indigenous Peoples still lack formal titles.¹⁴⁶

To meet a global demand from communities wishing to take advantage of the newest geographic information system technologies, new civil society organizations have arisen to meet the challenge. Established in 2015, Cadasta Foundation acts as a technical service provider developing and promoting digital technology to document, analyze, store and share land and resource rights information.¹⁴⁷ In a rapidly evolving, multi-dimensional legal context, Cadasta brings mapping and documentation processes to another level by aligning data collection with national data standards and engaging key stakeholders such as land administration agencies.¹⁴⁸ This alignment of local information with national land

^{143.} *Id.* ("Speaking at the opening ceremonies of the 2017 Indigenous Peoples Summit, Supreme Court Associate Marvic Leonen said that the proposed IPRA went through rigorous debates and revisions before it was enacted into law in 1997.").

^{144.} Sedfrey M. Candelaria, Indigenous Peoples and Their Right to Ancestral Domain, *in* STUDIES ON SPANISH-PHILIPPINE PRIVATE LAW: PAPERS OF THE PRIVATE LAW OF THE PHILIPPINES AND SPANI INTERNATIONAL SCIENTIFIC CONGRESS 36, 38 (2015) ("Conceptually, IPRA became immediately controversial on account of its apparent inconsistency with the Philippine Constitution, particularly the doctrine of jura regalia, i.e. that "all lands of the public domain belong to the State The framers of the 1987 Constitution deemed it fit to articulate the rights of indigenous communities in a more elaborate set of provisions signaling an unprecedented recognition of indigenous rights to their ancestral domain.").

^{145.} Mattia Cabitza, *Peru Leads the Way for Latin America's Indigenous Communities*, THE GUARDIAN (Sept. 12, 2011), https://perma.cc/7YCG-ZBX7 ("Against the wider backdrop of a struggle that pits the ancestral owners of untapped natural resources against greedy governments and corporations, Peru's new law on the right of Indigenous People to prior consultation may set a regional precedent in avoiding lengthy legal battles and, more importantly, in the prevention and reduction of social conflicts.").

^{146.} See THE TENURE FACILITY, *supra* note 133 ("Despite existing laws that secure their rights, they have formal legal ownership of 10% of the land and have some degree of government-recognized management rights over an additional 8%.").

^{147.} *About Us*, CADASTA, https://perma.cc/KV3J-6J3Q (last visited Dec. 13, 2019) ("By creating an accessible digital record of land, property, and resource rights, we help empower individuals, communities, organizations, governments, and businesses with the information they need to make data-driven decisions and put vulnerable communities and their needs on the map.").

^{148.} *Id.* ("We target the world's tenure-insecure people in rural, urban, and peri-urban areas left out of top-down government land registry systems. Recognizing that every partner is unique, our tools and services can accommodate a wide range of technical capabilities and resources and can be applied to a variety of different sectors."); Amy Coughenour Betancourt, *Bridging Gap to Advance Land Rights*,

administration systems stands in concert with Professor Brown Weiss's kaleidoscopic approach, which noted the considerable potential of technology to bring together different entities to enforce and implement international legal standards. Cadasta ensures that local maps can be integrated into other political or technical maps to fit demands in any country to preserve the long-term value of data gathering.¹⁴⁹ As of 2018, Cadasta has incorporated almost one million hectares of community lands onto their mapping platform.¹⁵⁰

In Colombia, Law 70 recognized Afro-Colombian community land rights claims over six million hectares in 1993, but titling has been stymied for more than two decades. Cadasta is now assisting the Ethnic and Indigenous Lands Observatory at the Universidad Javeriana ("OTEC") and the Proceso de Comunidades Negras towards formalizing the land rights of Afro-Colombian communities.¹⁵¹ Javeriana University collects and stores data on Cadasta's platform linked to OTEC's own system to develop the information and maps required to formally register communities' land rights.

CADASTA (Jul. 28, 2018), https://perma.cc/WC93-92RM ("Around the world, the gap between no land rights and formal ones seems insurmountable–with an estimated 70% of the land in the developing world undocumented. Often government land administration systems leave out the most poor and vulnerable people, and are not equipped themselves to manage the Herculean effort of data collection, mapping, and registering property rights.").

^{149.} Betancourt, *supra* note 148 ("Cadasta is 'bridging the gap' in advancing land rights for the most marginalized people in a number of ways. The first is by providing access-to technology, tools, and resources which are used by our partners to document and literally put unrecognized people and communities on the map. . .Once communities are mapped with initial documentation of land and resource rights—which might not yet represent formal land rights—it can often open up access to both public and private sector resources, such as loans, agricultural inputs, water, sanitation, and other services previously not available.").

^{150.} CADASTA, BUILDING A SOLID FOUNDATION FOR IMPACT: A CADASTA 2018 ANNUAL REPORT 4, 5 (2018), https://perma.cc/XQM7-X3BK ("Over the course of 2018, we have grown our networks, partnerships, and the number of households and people documented on the Cadasta platform, reaching over 1 million people by year's end.").

^{151.} Law 70 of 1993, AFROCOLUMBIANS, https://perma.cc/J6FK-LNEH (last visited Nov. 6, 2019) ("The passages of the Law 70 or 'Law of the Black Communities' in August 27, 1993, is one of the biggest achievements of the Afro-Colombian civil rights movement. This law is an instrument against the historical exclusion and lack of recognition Afro-descendants have suffered since slavery. According with Law 70, the Colombian government must guaranty the protection of the ancestral territories of the Afro-descendants, invest in their economic development, and protect their cultural identity and civil rights."); Customary & Community Lands, CADASTA, https://perma.cc/X7BS-7KZN (last visited Dec. 13, 2019) ("In Colombia, the Ethnic and Indigenous Lands Observatory at the Universidad Javeriana works with Afro-Colombian and indigenous communities to document, claim, and self-manage their land rights. In the first phase of the project, the University utilized Cadasta's platform to identify community-held lands for 148 communities across Colombia and track the progress of formal government recognition. In the second phase, Cadasta is partnering with Universidad Javeriana and the Proceso de Comunidades Negras (PCN) to formalize community land rights for 50 communities and assist more than 200 communities in advancing their rights. The data collected and stored on Cadasta's platform will be used to develop the information and materials needed to apply for formal government recognition of their community land rights.").

Cadasta's platform relies on "open-data" and provides an open access information platform.¹⁵² Cadasta partnered with the Land Portal Foundation to host a global discussion on the implications of open data in 2016.¹⁵³ As Annette Jaitner of Transparency International has stressed, "open data is an important requisite for transparency, accountability, participation, and integrity."¹⁵⁴ Communities may legitimately fear releasing open data on their land rights while data on others' land rights are not openly available. Yet, hopefully opening data will reduce information asymmetry, as illustrated in the examples above, so that everyone—individuals, communities, non-governmental organizations, governments, international courts, and the private sector—can benefit from such information. This trend parallels Professor Brown Weiss's ongoing scholarship promoting intergenerational equity and a more transparent, legally accountable civil society.

CONCLUSION

Humanity is racing towards an uncertain, if not daunting reckoning. We ride a geometric curve of exponential change and globalization. The world has never experienced an equivalent rise in consciousness and good governance (defined by accountability, transparency, fairness). Rendering our planet profane, we continue to treat Earth's vast web of natural resources with irreverence and avarice.

Managing explosive growth and global changes requires a new mindset, a balancing of capitalism, and a strengthened governance framework with a renewed respect for Indigenous Peoples' rights and ecosystem knowledge.

In this context, Edith Brown Weiss's promise of social and ecological resilience woven into a kaleidoscope of global, national and local legal elements serves as a beacon. Professor Brown Weiss continues to forge pathways to protect life, our dignity, and our Earth's bounty by securing cross-generational equity and a more sustainable future.

^{152.} Open Data, CADASTA, https://perma.cc/U3PQ-LXVX (last visited Dec. 13, 2019).

^{153.} Land Debate on Open Data and Land Governance, CADASTA, https://perma.cc/C34S-LQN3 (last visited Dec. 13, 2019).

^{154.} Id.