

Decolonizing biodiversity conservation

Esteve Corbera^{1,2,3}

Sara Maestre-Andrés¹

Yolanda Ariadne Collins⁴

Mathew Bukhi Mabele⁵

Dan Brockington^{1,2,6}

¹ Institute of Environmental Science and Technology, Universitat Autònoma de Barcelona, Spain

² Institució Catalana de Recerca i Estudis Avançats (ICREA), Spain

³ Department of Geography, Universitat Autònoma de Barcelona, Spain

⁴ School of International Relations, University of St. Andrews, UK

⁵ Department of Geography and Environmental Sciences, University of Dodoma, Tanzania

⁶ Department of Private Law, Universitat Autònoma de Barcelona

Abstract

Decolonizing biodiversity conservation science and practice involves a transition towards more locally rooted, plural, socially just, and convivial forms of conservation, moving away from mainstream conservation approaches, such as protected areas, sustainable resource management plans, or market-based instruments that are strongly rooted in Eurocentric ontologies and epistemologies. In this article, we introduce and review the contributions to the special issue "The challenges of decolonizing conservation" and we identify six principles that can be thought of as starting points in efforts to decolonize conservation: recognition, reparation, epistemic disobedience, relationality, power subversion, and limits. We explain how these principles feature in the collection's contributions and how they can contribute to decolonizing conservation science, policy, and practice. We also acknowledge that there can be differences over meaning and emphasis regarding the principles among Indigenous and local peoples, scholars, and practitioners. Yet we think that their implementation can result in subtler and less universalizing conservation approaches.

Key words: decolonization, conservation, biodiversity, principles, conviviality

Résumé

La décolonisation des sciences et des pratiques de conservation de la biodiversité implique une transition vers des formes de conservation plus enracinées localement, plurielles, socialement justes et conviviales, s'éloignant des approches traditionnelles de conservation, telles que les aires protégées, les plans de gestion durable des ressources ou les instruments fondés sur le marché qui sont fortement axés enracinés dans les ontologies et épistémologies eurocentriques. Dans cet article, nous introduisons et passons en revue les contributions à la section spéciale « Les défis de la décolonisation de la conservation » et nous identifions six principes qui peuvent être considérés comme des points de départ dans les efforts de décolonisation de la conservation: reconnaissance, réparation, désobéissance épistémique, relationnalité, subversion du pouvoir, et les limites. Nous expliquons comment ces principes figurent dans les contributions de la collection et comment ils contribueraient à décoloniser la science, la politique et la pratique de la conservation. Nous reconnaissons

¹ Email: esteve.corbera@uab.cat. This is the introduction to Dan Brockington, Esteve Corbera and Sara Maestre (eds.). 2021. "The challenges of decolonizing conservation", Special Section of the *Journal of Political Ecology* 28, 889-1100, written in 2023.

également qu'il peut y avoir des différences quant à la signification et à l'importance accordée aux principes parmi les peuples autochtones et locaux, les universitaires et les praticiens, mais nous pensons que leur mise en œuvre peut aboutir à des approches de conservation plus subtiles et moins universalisantes.

Mots clés: décolonisation, conservation, biodiversité, principes, convivialité

Resumen

Descolonizar la ciencia y la práctica de la conservación de la biodiversidad implica una transición hacia formas de conservación más arraigadas a nivel local, plurales, socialmente justas y amigables, alejándose de los enfoques de conservación convencionales, como las áreas protegidas, los planes de gestión sostenible de recursos naturales, o los instrumentos basados en el mercado que se inspiran en ontologías y epistemologías eurocéntricas. En este artículo, presentamos y revisamos las contribuciones al número especial "Los desafíos de descolonizar la conservación" e identificamos seis principios que pueden considerarse puntos de partida en los esfuerzos por descolonizar la conservación: reconocimiento, reparación, desobediencia epistémica, relacionalidad, subversión del poder, y límites. Explicamos cómo estos principios aparecen en las contribuciones de la colección y cómo contribuirían a descolonizar la ciencia, las políticas y las prácticas de conservación. También reconocemos que puede haber diferencias sobre el significado y el énfasis con respecto a los principios entre los pueblos Indígenas y locales, los académicos y profesionales de la conservación, pero creemos que su implementación puede resultar en enfoques de conservación más sutiles y menos universalizantes.

Palabras claves: descolonización, conservación, biodiversidad, principios, convivencia

Resum

Descolonitzar la ciència i la pràctica de la conservació de la biodiversitat implica una transició cap a formes de conservació més arraigades a nivell local, plurals, socialment justos i amigables, allunyant-se dels enfocaments de conservació convencionals, com les àrees protegides, els plans de gestió sostenible de recursos naturals, o els instruments basats en el mercat que s'inspiren en ontologies i epistemologies euro-cèntriques. En aquest article, presentem i revisem les contribucions al número especial "Descolonitzant la conservació de la biodiversitat" i identifiquem sis principis que poden considerar-se punts de partida en els esforços per descolonitzar la conservació: reconeixement, reparació, desobediència epistèmica, relacionalitat, subversió del poder, i límits. Expliquem com aquests principis apareixen a les contribucions de la col·lecció i com contribuirien a descolonitzar la ciència, les polítiques i les pràctiques de conservació. També reconeixem que pot haver diferències sobre el significat i l'èmfasi respecte als principis entre els pobles Indígenes i locals, els acadèmics i professionals de la conservació, però creiem que la seva implementació pot resultar en enfocaments de conservació més adequats i menys universals.

Paraules clau: descolonització, conservació, biodiversitat, principis, convivencia

Iksiri

Kuondoa fikra za kikoloni kwenye sayansi na kanuni za uhifadhi wa bioanuwai kunahusisha hatua za mageuzi kuelekea uhifadhi unaozingatia utu na upamoja, tamaduni za jamii husika, na haki za kijamii, ili kuondokana na mbinu tawala za uhifadhi, kama vile uwepo wa maeneo tengefu, mipango endelevu ya usimamizi wa rasilimali, au mifumo ya kimasoko iliyojikita zaidi katika ontolojia na epistemolojia za Kimagharibi. Kwenye makala haya, tunafanya utangulizi na mapitio ya michango ya toleo maalum litwalo "Kuondokana na fikra za kikoloni kwenye uhifadhi wa bioanuwai" na tunatambua kanuni sita ambazo zinaweza kuzingatiwa kama sehemu ya kuanzia katika juhudi za kuondokana na fikra za kikoloni kwenye uhifadhi: utambuzi wa waliotengwa, fidia kwa walioumizwa, kutotii epistemolojia tawala za Kimagharibi, uhusiano mpana zaidi, kupindua nguvu za ukoloni, na ukomo katika matumizi. Tunaeleza jinsi kanuni hizi zinavyoonekana kwenye michango ya makala na namna ambavyo zingechangia kuondokana na fikra za kikoloni kwenye sayansi, sera na kanuni za uhifadhi. Pia tunakubali kwamba panaweza kuwepo tofauti za uelewa na msisitizo kuhusu kanuni baina ya wazawa na wenyeji, wanazuoni, na watendaji, ilhali tunaamini kwamba utekelezaji wake unaweza kusababisha mbinu za uhifadhi zisizo za hila na zisizojumuisha ulimwengu wote.

Maneno muhimu: kuondoa ukoloni, uhifadhi, bioanuwai, kanuni, ushawishi

1. Introduction

The word itself, 'research', is probably one of the dirtiest words in the indigenous world's vocabulary. [...] The ways in which scientific research is implicated in the worst excesses of colonialism remains a powerful remembered history for many of the world's colonized peoples.

Linda Tuhiwai Smith, 2008, *Decolonizing methodologies. Research and indigenous peoples*

The need to decolonize biodiversity conservation has become a matter of concern and reflection among some academics and practitioners in the field. They advocate for a transition towards more locally-rooted, plural, socially just, and convivial forms of conservation that move away from typical conservation approaches, such as protected areas and other command and control regulations, sustainable resource management plans, or market-based instruments (Adams & Mulligan, 2002; West & Aini, 2018; Büscher & Fletcher, 2020). This transition does not require a simple tweaking of the *status quo*, for example by making conservation science and practice more open, "participatory" and locally meaningful, but to disrupt and resist the processes of knowledge production that underpin the policy and practice of mainstream biodiversity conservation, as well as the other social processes and power relations that underpin conservation efforts (Mbembe, 2016).

As has long been recognized, many ideals, visions and practices of biodiversity conservation reflect colonial thinking. These ideas are grounded on ontologies, epistemologies, and institutions that are mostly Eurocentric, rooted in principles of modernity and progress that separate humans from nature, and scientific rationality guided by positivist science and technological fixes. The origins of what most people understand as "effective" conservation, for example protected areas, or sustainable resource management, can be traced back to colonial endeavors that involved, on the one hand, the enclosure of landscapes to preserve pristine nature for the benefit of economic and political elites, and on the other the control of land resources to serve the market needs of the colonial state, for example through technical forestry (Guha & Gadgil, 1992). These efforts are intimately tied with capitalism and the state's willingness to control local populations and they are grounded in scientific disciplines such as conservation biology or ecological science which contribute to demeaning non-Eurocentric epistemologies and their positive effects on biodiversity conservation. The colonial project uses western science instrumentally to justify: (i) the appropriation and commodification of land and resources, (ii) the establishment of protected areas based on the fortress-conservation model, (iii) the roll-out of market-based conservation practices, and (iv) to lay the groundwork for the codification and institutionalization of tenure relations, and of environmental rights and responsibilities to make local people accountable for environmental damage or stewardship.

Colonialism has historically involved a subjugation of the "Other", through the appropriation, erasure and belittling of the Other's bodies and knowledge, culture and worldviews (Collins *et al.*, 2021; Mignolo, 2011; Tuck & Yang, 2012). Colonialism is rooted in structures of power that dominate and marginalize local populations in colonized countries, particularly Indigenous Peoples, racial minorities, or women. The Other's beliefs, culture, institutions and knowledge are regarded as inferior to those of the colonizing subject. This process of domination and marginalization has been dominant in many countries worldwide for the past two or three hundred years and remains pervasive and socially ingrained as of today. Requena-i-Mora and Brockington (2021, p. 1045) also highlight that in any colonial project there is a particular "way of seeing the world" that makes possible "to identify groups of people who need to be governed in particular ways, or nature (land, resources) that needs to be used in particular ways." Colonization, thus, involves "mapping, categorizing, surveillance and control."

Decolonizing should thus be regarded as "a long-term process involving the bureaucratic, cultural, linguistic and psychological divesting of colonial power" (Tuhiwai Smith, 2008, p. 8). In the context of biodiversity conservation, such divesting can take specific courses of action that we highlight further below based on the contributions to this special issue and emergent literature. The articles in this collection reflect on how decoloniality can challenge mainstream biodiversity conservation science, policy and practice and in so

doing enhance human wellbeing and ecological sustainability, whilst breaking the Human-Nature divide. The articles suggest how to pursue such an ambitious task. They share the goals of deconstructing Eurocentric biodiversity conservation and devising alternative ways of thinking about and "doing" conservation. In this Introduction, we summarize the authors' arguments and, inspired by the latter, we highlight some principles that underpin the decolonization of biodiversity conservation.

Most authors are researchers who participated in the workshop *Conservation, Climate change and Decolonization. Exploring new frontiers in Conservation Social Science*, held at the Institute of Environmental Science and Technology, Universitat Autònoma de Barcelona (ICTA-UAB), Spain, on 29th-30th October of 2019, and co-organized with the Sheffield Institute for Development, (now the Institute for Global Sustainable Development, IGSD), of the University of Sheffield, UK. This was therefore a workshop to think about decolonizing biodiversity conservation held in and organized by a western academic institution, which tried to be more globally relevant through specific design and preparation practices.

A committee of sixteen workshop promoters was constituted involving members from universities in thirteen different countries, including Colombia, Mexico, South Africa, Tanzania, Chile, India. The committee involved 8 women and 9 men, who disseminated the workshop call for papers widely and encouraged participation of early-career researchers in it. We covered travel and accommodation expenses from 'global Majority' countries scholars and practitioners, who unfortunately were fewer than we originally envisaged. Several selected participants had problems with their Visa applications and could not arrive to the workshop. The workshop was finally attended by 37 scholars from India, Kenya, Colombia, China, Spain, Ireland, UK, Norway, Switzerland, Canada, USA, The Netherlands, Germany, and Belgium.

The resulting dominance of western countries' scholars in the workshop, reflects the persistent legacies of colonialism and the restricted freedom to travel (or work) across borders. But we must remember too that the North, and its colonies, are many layered. This workshop took place in Catalunya where massive protests against the Spanish crackdown against moves for Catalan independence were taking place. The uncertainties are renewed at the time of writing. The workshop began with an explanation of the history of Catalunya as a historical nation and the several attempts to claim for the right to self-determination, which materialized in the organization of a referendum for independence on October 1st, 2017 supported by an inter-classist transversal social movement. The referendum was declared illegal by Spain's Constitutional Court and the police thus tried to prevent it. Several electoral colleges were closed during the voting day, but Catalan citizens self-organized, confronted the police, and kept most colleges open throughout the day. There was a final turnout of about 43%, with 93% of voters opting for independence. And despite the fact that the referendum results were not enforced, it was one of the most important acts of self-organization and political mobilization held in Europe over the past few decades. The struggle for decolonization was part of the lived realities for some of the organizers.

The workshop was structured around four sessions of two parallel panels. Each panel addressed different topics such as the practice and representation of convivial conservation; the political ecology of protected areas; method and processes to engage communities; conservation conflicts; the political ecology of conservation and climate change; biodiversity and carbon offsetting; problematizing sustainability; and, finally, decolonizing conservation and sustainability. Three keynotes were given by Dr. Sarah Bracking (University of Kwa Zulu Natal and Kings College London), Dr. Catherine Corson (Mt Holyoke College) and Dr. Rosaleen Duffy (Sheffield University), and the final workshop session consisted of group discussions around specific topics of concern in decolonializing biodiversity conservation.

2. Interrogating mainstream biodiversity conservation approaches

Four of the eight contributions destabilize some of the concepts, categories and metrics used in conservation by exploring their colonial history, and the contradictions and conflicts that surface in their manifestations and use. Jevgeniy Bluwstein, for example, explores the history of the concept of *landscape*, and what he terms *landscapism*. He observes that it has long been known that notions of landscape conceal the inequality and violence of the social relations that have produced the way in which land appears depicted under such a term. The association of landscapes with symbolic and material alienation and appropriation prompts him to argue that,

Rather than taking landscapes for granted as given spaces where nature and culture meet, we should begin our inquiry by paying attention to landscapism, how the idea of landscape is mobilized to see, know, and intervene in nature-society relations. (pp. 906)

Bluwstein argues that *landscapism* is a well-established feature of colonization, containing both the ability to imagine new futures for places that are alienated from their histories and residents, and to represent lands and peoples in particular ways. He argues that landscape approaches, as they appear in Tanzania, provide vehicles for removing discursively, representationally, and ultimately physically, people from the places which they call home. This occurs because Tanzanian landscapes are represented as *natural* and the people who live within them are threats to that nature, whereas European landscapes are, in contrast, often regarded as *cultural*. While in the former, people *disturb* nature, in the latter people *belong to* nature.

Following Tuck and Yang (2012), Bluwstein also argues that we should attend to the irreconcilable legacies of colonization, which will not go away without profound structural change. The irreconcilability he identifies is 'the power to represent.' Specifically, he contends that the landscape imbues conservation and environmental scientists and practitioners with the power to represent people and their relationships to land and environment, which is the power he wishes to contest.

Eleonora Fanari (2021) reflects critically on the dominant concept in conservation of the protected area, through the examination of 26 conflicts occurring across India's national parks, tiger reserves and wildlife sanctuaries. In eighteen of these cases she documents repeated cases of dispossession and displacement, of criminalization of forest dwellers, and of militarized responses to alleged trespass and incursion, and she sheds light on the limited or ineffective implementation of the country's Forest Rights Act, which is supposed to recognize and secure the rights of local and forest dwellers communities to use, inhabit and conserve forest areas. She also documents the variety of resistance strategies pursued by affected people, ranging from marches and street protests (the most frequently attempted) to land occupations (the least frequent).

Fanari delivers, however, sobering messages regarding the success of such resistance strategies. Echoing the depressing but unsurprising conclusion of previous work on 'fortress' conservation, she shows that oppression works to the extent that strong alliances between governments and conservation NGOs have been able to marginalize and silence the poor. According to her analysis, it takes equally strong alliances, with strong links to authorities and power, to be able to construct effective opposition to loss of land and resources from conservation.

Yolanda Ariadne Collins and colleagues (2021) shift the focus away from landscapes and protected areas to interrogate another powerful conservation approach: market-based conservation initiatives as implemented in diverse sites across the world (Côte d'Ivoire, Ghana, Tanzania, Nigeria, Colombia and Peru). Under the rubric of elucidating more convivial forms of conservation (Büscher & Fletcher, 2020), the authors argue that such initiatives "advocate for conservation pursued as an outcome of social interaction and organization rather than as a neutral, neatly packaged and rational intervention into societies marked as problematic" (p. 970). Through a series of research vignettes from various projects, the authors distil important lessons, notably that "colonial power asymmetries continue to shape interactions between dominant and marginalized stakeholders in conservation projects", and that market-based conservation initiatives may exacerbate inequalities on the ground, as they "amplify these colonial legacies." (p. 982)

Finally, Marina Requena-i-Mora and Dan Brockington (2021) interrogate the consistency of a series of environmental indices and indicators which are often used to justify, directly or indirectly, transitions to sustainability and enhanced biodiversity. The authors show how key international sustainability indices and indicators, such as the Environmental Performance Index, Domestic Material Consumption, Material Intensity, the Material Footprint, the Carbon Footprint, the Ecological Footprint and CO₂ territorial emissions promote particular colonized measurements of sustainability, thus favoring wealthier nations.

First, the authors demonstrate that these measures do not correlate with each other and that, in fact, some correlate positively with GDP and others negatively. For example, the material, ecological and carbon

footprints rise with GDP, but the environmental performance index decreases. Second, they show that there are different economic theories underpinning these contrasting scenarios. Theories which favor the idea of green growth are premised on the notion that economic growth can be good for the environment, and consequently provide the state with the wherewithal to invest more in conservation areas, and anti-pollution legislation, for example. Indices which favor those theories measure the sorts of things which states can positively change. Other theories focus on the absolute amounts of carbon produced by larger economies, and the higher levels of resources, and, ultimately, land that they require to sustain their needs.

Third, the authors also highlight that some indicators do not count environmental change that happens outside a country's borders, even if it arises because of the economic demands of that country. This can artificially lower a country's environmental impact. Overall, Requena-i-Mora and Brockington argue that decolonized measures of environmental welfare need to confront the fact that they can be used to make rich countries look green. Otherwise, there will be injustices built into the worldviews that are seeking to measure transitions to sustainability.

3. New biodiversity conservation imaginaries

Other contributions challenge yet additionally propose alternative modes of thinking about, and acting upon, biodiversity conservation. Judith Krauss (2021), for example, explores what decolonized and convivial conservation might look like, if applied to the Sustainable Development Goal 15 (SDG 15 - Life on Land). First, she summarizes Ivan Illich's work on *Tools for Conviviality* (Illich, 1973), noting its anti-developmental and anti-capitalist stance, its advocacy that the rich should live within their means and its championing of human interdependence, and with justice for the marginalized. Second, she introduces Büscher and Fletcher's popular ideas on 'Convivial Conservation' (2020) which seek to plot a third way to transform conservation moving beyond market forces, or stronger fortresses, to acknowledge the violence of past conservation mistakes, encourage new ways of engaging with and visiting non-human nature, and support for participatory, grounded conservation measures. After drawing a comparison of Illich and Büscher and Fletcher's works, she explores how convivial, by any of the definitions above, and decolonized is the vision for the planet that is outlined in SDG 15. Critically, she finds no desire for the rich to live within their means, and inadequate protection of the rights of marginal rural peoples especially in light of historical injustices. There is an over-reliance on the idea of protected areas as means to halt biodiversity degradation, but in an unvarnished form, and in ways which do not adequately draw attention to these areas' socio-economic implications.

In the context of the current dynamics and challenges of orangutan conservation, which entail large-scale deforestation, habitat loss and, consequently shrinking populations, Hannah Fair (2021) explores UK consumers' recent boycott of palm-oil and products with palm-oil, understood by its supporters as an effective strategy to protect the rainforest and the orangutans. She observes, nonetheless, that whereas some interviewees are highly aware of the plight and needs of people who work and live with palm-oil in Indonesia, such accounts are void of local agency, and privilege instead universal explanations of local destruction led by western consumption patterns. These views echo neo-Malthusian approaches which pitted the problems of a united 'humanity' and what it ('we') does to the non-human world.

Fair also observes that anti-palm oil activism cannot be reduced to such simple problematics. Across her interviewees, and the charities that she worked with, there are complex structures of feeling, approaches and modes of engagement with biodiversity and orangutan conservation that were intimately associated with and driven by antipathy to palm-oil but materialized in other practices of environmental care, including for example caring for animals in their own lives, or supporting local nature trusts. As she puts it,

...perhaps the true value of palm oil avoidance lies in the sense of agency that it engenders, in terms of critically engaging with one's complicity with destruction, and the extension of this agency into other more immediate domains of care and compassion. (p. 941)

Fair's account suggests that we should not tell singular stories about people, and that in so doing we can contribute to decolonization. In the same way that there is not a single type of farmer who logs forests or who engages in casual oil palm work, and that these farmers or workers may be diverse in terms of gender, culture or even racial diversity, there is not one single type of responsible or irresponsible consumer that drives degradation or one single actor to blame for orangutans' fate in the oil-palm global value chain. There are multiple ways through which the connection, reflection and acknowledgement of histories and complicities that comprise decolonization can be constructed. There are elements of anti-palm oil boycotts which invoke impositions and interference in the colonizing mode, but there are others which contribute to emancipating citizens to take action in the immediate domains of environmental stewardship and human care.

Megan Youdelis and colleagues (2021) discuss the resurgence in Indigenous-led conservation underway in Canada, which is a response to the harms of colonial conservation and offers a viable alternative for the protection of biodiversity, territory and culture. Their work is predicated upon the fact that, in Canada, as in so many other countries and particularly in the 'global Majority', "colonialism is not an event that can be relegated to the past but is an ongoing structure of dispossession that shapes our colonial present." (Youdelis *et al.* 2021, p. 994) The authors detail current efforts of First Nations, Inuit, and Métis in Canada to protect their territories according to their own visions and priorities and drawing on their own governance, legal, and knowledge systems to do so, within the context of colonial-capitalist incursion. They recite some of the litany of abuses and dispossession that has dominated the lives of Indigenous Peoples and go onto to explore what role Indigenous Protected Areas could play in safe-guarding these Peoples' rights to, and use of, their lands – free from incursion by settler, state or corporate interests.

The authors draw on their work with Grassy Narrows First Nation and two Tsilhqot'in First Nation communities who have declared Indigenous Protected Areas in their territories—without adequate state recognition—to protect their lands and waters for future generations in the face of extractive industries. Members of Grassy Narrows First Nation suffer from the effects of historical evictions, mercury poisoning from river contamination, extensive logging, and the threat of mining. In addition to pursuing direct action and legal recourse through the courts, Grassy Narrows declared their territory to be an Indigenous Sovereignty and Protected Area to assert their jurisdiction and rights. Similarly, two Tsilhqot'in communities have asserted their jurisdiction, rights, and legal authority by establishing the Dasiqox Nexwagwezʔan Tribal Park. This move was in part to resist the development of a new mine, the latest incursion in over 150 years of territorial impacts including significant logging and mining activities, and to assert their land title where the courts did not recognize it.

The authors demonstrate how the Indigenous Protected Areas these Nations recently established are strategies to re-gain control over land and resources, to revitalize language and culture, and to enact their rights and responsibilities to their territories. The Indigenous Protected Areas are part of a continued battle to establish sovereignty over the Nations' lands and waters, yet they still suffer from insufficient support from Canadian governments, both politically and financially. One branch of the state may support Indigenous Peoples' work and stewardship, and other branches seek actively to undermine it, working closely with powerful mining and logging interests to do so. The authors argue that Indigenous-led conservation is promoted in theory, while actively undermined in practice. This in turn, limits possibilities for state reconciliation with Indigenous Peoples and for advancing the decolonization of conservation in Canada.

Youdelis *et al.* are not the only contributors who shed light on the conceptual inconsistencies or practical challenges of new attempts to plan for and measure social and environmental progress or promoting conservation. Krauss (2021) argues that neither Illich's *Tools for Conviviality* (1973) nor Büscher and Fletcher's *Convivial Conservation* (2020) sufficiently address the politics of gender, or race, as sources of injustice and misfortune. In addition, Banerjee and Sharma (2021) illuminate the intricacies of conviviality in the context of human-animal interactions. In a mosaic of tea estates, farms and forests in rural Assam, India, with large numbers of elephants moving through the landscape, the authors narrate the hostile encounters between these animals and people, which often lead to the death of one or the other. They examine the different gender roles that place men and women in different parts of the landscape at different times of the day and year: women spend more time collecting firewood and water from rivers, while men spend more time livestock grazing, and

clearing farms, which women tend to sow, weed and harvest; men spend more time guarding crops, women more time employed on tea plantations. Men can simply be away from elephants because they migrate looking for work for long periods.

In this context, women and men react differently to elephant encounters and to existing forms of elephant conservation. The former acknowledge the cultural and religious significance of the animal, report calmer encounters, and empathize with the elephants' daily struggle for food and survival. However, they are concerned about animals' increasing presence and how it makes them fearful whenever they collect firewood or see the elephants entering the community area. Despite their respectful interactions with elephants, however, women would prefer the government 'to take back the animal', i.e. to remove them from human spaces. Men are also concerned about growing numbers of elephants, but their knowledge and complaints are articulated around the idea that the animals are increasingly aggressive, and the demand for more efficient economic compensation when crop raiding and human injuries or deaths occur. Overall, then, Banerjee and Sharma demonstrate the importance of engendering analyses of convivial conservation and adopting an intersectional perspective that can also devise how apparently workable conviviality between humans and animals can be perceived, experienced, and acted upon differently along axes of gender, class, race, and other determinants of social diversity.

4. Principles for decolonizing biodiversity conservation

As shown above, the authors in this collection offer interesting insights on the coloniality of biodiversity conservation and how it may be overturned. And although their research is mostly located in countries of the 'global Majority', we argue that decolonizing conservation is a matter of global concern. Biodiversity conservation is integrally bound up in the function and reproduction of capitalism, which is itself a vehicle of diverse forms of colonization that in turn pervade human societies worldwide. Protected areas, (eco-)tourism in and around them, as well as the commodification of ecosystem services and biodiversity tie these initiatives to an agenda of economic growth and development. As do global value chains that try to become more sustainable through market-based certifications and other forms of 'responsible environmentalism' although continuing to drive environmental destruction through fetishized energy and material flows, and socio-ecological relations. As such, biodiversity conservation approaches and global production and consumption processes depoliticize and foreclose discussion of the nature of the social and economic forces causing biodiversity loss and environmental degradation and hinder implementation of effective solutions to deal with these problems.

In Canada, for example, various legal, political, and cultural processes are underway that are advancing Indigenous rights that have a bearing on conservation practice and policy (Youdelis *et al.*, 2021). The continued discrimination against Indigenous groups in Australia and New Zealand is a significant aspect of politics there, and of conservation policies. More generally in Europe, rural people's lands are commonly of interest to often distant, metropolitan elites, who control market, governance and legislation processes that determine the fate of land and resources inscribed in rural territories. Farming practices are determined by global energy and food regimes, which are affected by geopolitics and the interests of the private sector and processes of capital accumulation (McMichael, 2009). Protected areas and incentive-based forms of conservation simultaneously emerge in a depopulating countryside, whilst the tourism and second-home building sectors expand on abandoned or unprofitable farmland. These processes have nothing like the violence of genocidal invasion and conquest that has characterized encounters with Indigenous Peoples. Indeed, for some people, the very term 'Indigenous People and Local Communities' simply amalgamates utterly different entities. But we need to interrogate the uneven power relations that may sustain these processes of alienation, exclusion and disciplining through policies and markets, and the epistemic and socio-economic rationales that justify their existence and unfolding.

It is possible to digest, summarize and categorize these different studies, and from them distill a number of principles that could inform the decolonization of biodiversity conservation science, policy and practice. But not all of us were comfortable with such a project. We have undertaken this task, and present the results in the table below, but it is important to recognize and explain the discomfort it causes. Fanon wrote that

decolonization cannot "become intelligible nor clear to itself except in the exact measure that we can discern the movements which give it historical form and content" (Fanon, 1963, p. 36). A table of this nature might, therefore, invite the reader to think of legibility, equivalence and transferability (in a checklist of sorts), instead of chaos, depth and unpredictability, all of which are inherent in efforts to decolonize. The principles laid out here should therefore be thought of as starting points in efforts to decolonize conservation and not as an exhaustive list of what those efforts might entail.

Taken together these contributions suggest six principles that we think underpin the authors' contributions and could inform the decolonization of biodiversity conservation science, policy and practice. They are not meant to be exhaustive, nor a practical guide to decolonize conservation. As noted earlier, decolonizing biodiversity conservation involves challenging well-established Eurocentric and scientifically-informed understandings of which biodiversity should be preserved, where, how and for whom, and which species, ecosystems, or socio-natures 'we' can do without. As such, the operationalization of the proposed principles would be far from easy. We also acknowledge that one principle may be more important in some contexts than others, or one more accepted by and appealing to specific constituencies than others. Our intention is therefore to foster debate among those who think about or act upon biodiversity conservation regardless of their role as academics, policymakers, practitioners, or knowledge holders.

Recognition plays a key role in the process of decolonizing, since it constitutes a central feature of social and environmental justice. Fraser (1997) argues that there is no justice without recognition, since the act of recognition precedes the consecution of fair procedural and distributive outcomes. For this reason, we understand recognition as an overarching approach to justice, which should also entail fair procedures and distribution. However, we also acknowledge that understanding recognition in this way concedes somebody – often the state, and the powerful – with the legitimate authority to allow or disallow such recognition, which in turn implies that the subjects of recognition might lack such authority by themselves (Coulthard, 2014). Furthermore, the realization of recognition as a precursor of procedural and distributive justice does not necessarily imply addressing or being sensitive to the structures of colonialism and capitalism that create injustices in the first place.

In the context of decolonizing biodiversity conservation, it is paramount that all individuals with direct or indirect stakes in conservation affairs, regardless of their gender, race, age, cultural background, or other socio-economic or demographic characteristics that conform to their identity, are treated as a subject of conservation and thus a subject of justice. The promotion of marginalized actors in conservation is especially relevant while being aware of the political and social implications of exposing them to confront existing discriminating processes that may entail potential conflicts between communities, social groups, or individuals affected by conservation (Cousins, 2021).

Recognition is therefore, and inevitably, intersectional, in the sense that it acknowledges that individuals' *various, overlapping* and *inter-connected* socio-economic and political identities can result in unique combinations of discrimination and privilege. There are different scholar definitions and practitioner approaches to intersectionality, but these share a concern for understanding and acting upon the systems of power that constrain the social and political emancipation of some of these polyhedral identities.

In the process of decolonizing conservation, an *intersectional* approach can permit shedding light, for example, on which identities are excluded from the benefits of conservation praxis, based on prejudices or poor understandings of the environmental needs and interactions of these identities. And, which structures of decision-making contribute to maintain such prejudices and exclusions. In the United States, protected area management and aesthetic enjoyment has been historically circumscribed to White people of the richer and middle classes, whilst racialized and impoverished groups have been absent from these geographical spaces and excluded from park management institutions (O'Brien, 2015; Davis, 2019).

Principle	Key tenets	Suggestions from the collection's article author(s)
Recognition (and intersectionality)	<p>To involve marginalized actors in conservation, regardless of their cultural, racial, or socio-economic and demographic characteristics.</p> <p>To develop subtler and less universalizing conservation strategies, and to avoid simplistic understandings of human-environment interactions.</p> <p>To acknowledge and act upon intersectional forms of conservation privilege and marginalization.</p> <p>To ensure the fair participation of all recognized conservation subjects in problem and narrative framing, decision-making, and the fair distribution of conservation benefits and costs.</p>	<p>Situate dispossessed communities and farmers at the center of territorial planning (Bluwstein, 2021) and consider them legitimate subjects of resource rights (Fanari, 2021).</p> <p>Enable the recognition and effective mobilization of local resource groups by grassroots organizations (Fanari, 2021).</p> <p>Limited participation of citizens and Indigenous Peoples in the development of environmental policy and projects (Collins <i>et al.</i>, 2021).</p> <p>'En-gender' human-wildlife encounters to design more effective and socially just conservation strategies (Banerjee & Sharma, 2021).</p> <p>Respect Indigenous governance, jurisdiction, and authority (Youdelis <i>et al.</i> 2021).</p>
Reparation (and redress)	<p>To recognize the existence of historical psychological, physical or cultural harms inflicted by conservation.</p> <p>To compensate for these harms through material or symbolic means.</p> <p>To return land and governing authority to Indigenous Peoples.</p>	<p>Restitution of Indigenous Peoples' rights to govern their territories (Youdelis <i>et al.</i> 2021).</p> <p>Give land back to those who have been and continue to be dispossessed in the name of conservation (Bluwstein, 2021).</p>
Epistemic disobedience	<p>To interrogate the scientific foundations of conservation blueprints.</p> <p>To problematize data gaps and acknowledge inherent biases in conservation prescriptions emerging from 'objective' conservation science.</p> <p>To embrace plural ontologies and epistemologies, thus treating both rational science and local and indigenous knowledge as legitimate forms of apprehending the world.</p>	<p>Interrogate the biased design and misleading assumptions of global environmental indicators (Requena-i-Mora & Brockington, 2021).</p> <p>Value traditional and Indigenous knowledge in conservation policy and practice (Youdelis <i>et al.</i>, 2021; Fanari, 2021; Krauss, 2021).</p> <p>Yielding Indigenous knowledge and centering Indigenous perspectives in conservation research and practice (Youdelis <i>et al.</i> 2021).</p> <p>Question the idea of landscape as a way of seeing, knowing and representing nature-society relations (Bluwstein, 2021).</p> <p>Challenge the scientific representation and legal formalization of specific natural resource governance processes (e.g., charcoal production, Collins <i>et al.</i>, 2021).</p>

<p>Relationality</p>	<p>To acknowledge the multiplicity of relationships that humans have with each other and the natural world, and to reflect on how these contribute to biodiversity conservation, and to address global environmental challenges.</p>	<p>Place relationality over representation in the understanding and ordering of rural/conservation space (Bluwstein, 2021). Relational understandings of human-animal interactions can better inform conservation policy (Banerjee & Sharma, 2021).</p>
<p>Power subversion</p>	<p>To challenge the processes by which unjust colonized conservation policies are established. To ensure the recognition of all conservation subjects, and consequently fair procedure and distribution of conservation benefits and costs (see first principle).</p>	<p>Challenge and subvert the uneven structures of power govern the codification and use of landscapes (Bluwstein, 2021) and market-based conservation initiatives (Collins <i>et al.</i> 2021). Support Indigenous Protected and Conserved Areas which privilege relational approaches to conservation, assert Indigenous rights and responsibilities, and disrupt settler capitalist hegemony (Youdelis <i>et al.</i>, 2021). Legalize charcoal production in <i>miombo</i> forest ecosystems as a way to give local charcoal producers security of tenure for their livelihood (Collins <i>et al.</i> 2021).</p>
<p>Limits</p>	<p>To consider limiting the consumption of goods and services, particularly of richer populations, to halt global environmental change.</p>	<p>Question international sustainable development goals that do not challenge consumption of richer countries and populations, and do not problematize mainstream conservation approaches (Krauss, 2021). Acknowledge that indices of environmental performance make unequal ecological exchange invisible (Requena-i-Mora & Brockington, 2021).</p>

Table 1: Principles of decolonial biodiversity conservation. Source: authors' elaboration

In the collection, recognition appears (not so intersectionality) as a central tenet of decolonization in several articles, for example, in Bluwstein's suggestion to put dispossessed communities and farmers at the center of the landscapes we 'see' and codify or measure through scientific methods, such as cadastral maps, satellite imagery of environmental change, agricultural censuses, or agronomic models. Recognition also features in Fair's analysis of palm oil boycotts, which acknowledges the harms suffered by non-human nature (orangutans) while discussing the possibilities of addressing these harms through affirmative action by consumers and reflexive practice by local actors and oil palm companies. Drawing on the work of Coulthard (2014), Youdelis *et al.* challenge the concept of 'state-provided' recognition, noting that "Indigenous-led conservation provides an opportunity to surmount the colonial politics of 'recognition' as Indigenous peoples assert their inherent rights to exercise their responsibilities to their lands and waters as sovereign Indigenous peoples." (Youdelis *et al.* 2021, p, 996). Fanari's article emphasizes the important role played by local, grassroots organization in the recognition of local actors' struggles for forest rights, and the diversity of needs and claims these actors have. Collins *et al.* (2021) show that participation was lacking in both the establishment of Nigerian forest policy regulations and in the Peruvian authorities' construction of the narratives about indigenous potato farmers. Finally, Banerjee and Sharma (2021) advocate for a more effective inclusion of women in India's wildlife conservation and management strategies to generate a more nuanced picture of human-wildlife encounters, and to design more diverse forms of compensation for related harms.

Following recognition, decolonial conservation scholars place emphasis on *reparation*, which is the central tenet of transitional justice and, as shown above, also a central characteristic of recognition as a pillar of justice. In international human rights law, reparation involves measures taken by the state to redress gross and systematic violations of human rights or humanitarian law through the administration of some form of compensation or restitution to the victims. Reparation in conservation involves acknowledging the suffering that some actors and Peoples have experienced because of conservation actions, now or in the past (e.g., physical displacement, violence, mistreatment or demeaning their own cultural forms of understanding nature conservation). The acknowledgement of suffering should be followed by a process of redress that entails some form of compensation for the harms suffered, which can be symbolic and/or material. Youdelis *et al.*'s article (2021) reviews, for example, Canada's recognition and restitution policies and highlight that Indigenous activism to restore sovereignty over their lands and waters has been crucial in the face of inadequate forms of liberal 'recognition.'

Decolonizing biodiversity conservation also requires what has been called '*epistemic disobedience*' (Mignolo, 2011). This involves interrogating the scientific foundations of conservation science and practice. It requires examining critically the underlying assumptions about ecological and human-nature relations (or human behavior) that underpin mainstream conservation sciences, such as biology, ecology and environmental economics, which ultimately contribute to disciplining conservation subjects and designing and justifying conservation policy panaceas. Epistemic disobedience requires exploring data assumptions, gaps and analytical limitations that may lead to biased conclusions about the state of socio-nature relations, in a process recently referred as 'conservation data justice' (Pritchard *et al.*, 2022). Requena-i-Mora and Brockington neatly explore the false assumptions and embedded biases in the design of environmental indices, and trace these to colonial narratives of development and environmental progress that disregard the exploitative character of north-south, core-periphery relations.

Epistemic disobedience would also involve granting local and Indigenous socio-environmental knowledge with the same validity as rational science as a form of apprehending the world. In fact, it should also involve a process of reconciling scientific research with the historically researched Other – through processes of co-enquiry based on self-recognition and respect, mutual consent, and transformative long-term collaborative action (Caruso, 2016). Academics, NGOs and the state can work with traditional and Indigenous knowledge holders to better understand their needs, concerns, aspirations, and their demands in relation to the generation of new knowledge, and jointly devise specific actions that may translate into more effective conservation. For example, Banerjee and Sharma (2021) show how understanding the gendered nature of elephant-human interaction can shed more light on elephants' movements and behavior through the landscape, and on the distinct consequences that such interactions have for men and women, as well as their preferred courses of action regarding convivial conservation. Youdelis *et al.* further emphasize that "decolonial conservation involves not only the elevation of Indigenous knowledges, laws, and governance systems but creates spaces for cultural and language revitalization and the intergenerational transfer of knowledge through land-based learning." (2021, pp. 996). Collins *et al.* (2021) demonstrate a case of epistemic disobedience as contrary to the colonial-rooted understanding, charcoal production is formalized in natural *miombo* forests, allowing local producers and villages to earn revenues.

Relationality is a key principle of traditional and indigenous ontologies and epistemologies, generally understood as the multiplicity of relationships that humans have with each other and the natural world. It is widely recognized that Indigenous Peoples in many parts of the world conceive land and resources through spiritual connections to ancestors and non-human entities, and they consider them a source of knowledge that informs understanding of identity and culture. Indigenous Peoples also often situate interdependence and socio-ecological bonding as constitutive elements of human-human and human-nature relations, where practices of capital accumulation that could alter such relationships or undermine land sustainability are regarded as problematic (Wildcat & Voth, 2023). For these and other reasons, it has been argued that Indigenous values and resource management practices have historically contributed to maintaining ecosystem health, confronting societal pressures and environmental burdens, and practicing alternative forms of local environmental governance (Brondizio *et al.*, 2021).

We argue that relationality thus offers conservation scientists and practitioners the opportunity to better understand how nature, nature-human interactions, or environmental change is conceived and acted upon in specific territories, and provides insights into the ontologies and epistemologies that decoloniality aims to embrace. Bluwstein (2021) goes a step further and claims that relationality should substitute conservation's emphasis on representation, which consists of mapping and measuring negative environmental changes or conservation successes through the scientific and technological disciplines, to subsequently govern and discipline conservation subjects. Relationality, he argues, can also contribute to better realize how Indigenous and rural territories are imbued with politics, power and injustices that transcend conservation and that should be tackled if conservation has to succeed as a socially just endeavor. Banerjee and Sharma (2021) also demonstrate that gender and livelihoods shape relational understandings of animal-human interactions considerably, leading to a reconsideration of elephant conservation and policies for damage compensation. These need to be listened to and taken into consideration by those who can modify such policies.

This last point takes us to another key principle of decoloniality: the subversion of the power relations of dominance and subjugation over the colonized (conservation) subject or marginalized Other. Conservation goals and the means to achieve them have been defined historically by powerful (colonial) actors, such as western states or international development organizations, who operate in vertical, top-down structures. These actors have their own understanding of what should be conserved and how, devise their own strategies and narratives to do so, and are able to mobilize considerable funding to make such strategies appealing to a diversity of local and international constituencies.

Powerful actors set "what to do" regarding conservation in rural landscapes or value chains, for example through territorialization practices, including protected areas, or codes of conduct such as sustainable certifications. This is clearly explicit in the analyses of market-based conservation initiatives by Collins and colleagues (2021), and the historical reviews of the idea of landscape and protected areas by Bluwstein (2021) and Fanari (2021). Decolonizing would thus require subverting these structures and practices, for example by granting power and authority to institutions which are not necessarily at the center stage of conservation governance, such as Indigenous-led organizations, local NGOs that do not further colonial projects, and women's groups.

Finally, the sixth and last governing principle of decolonizing conservation is to acknowledge the existence of biophysical and environmental *limits* for human development, which to be respected require curtailing the material and energy consumption of the rich (Kallis, 2019). The fact that such limits and environmental thresholds have not yet been taken seriously into account by global capitalism – and the prospects that this happens are grim – explains much environmental degradation to date, and why most conservation interventions to date can be regarded as spatial fixes that preclude human-nature interactions in some places whilst ignoring destruction in many others. Furthermore, the often-championed idea that the world's biodiversity can be maintained if it remains in specific geographical locations while impoverished in others is misleading; even the most geographically distant and human-altered Nature suffers today from human inference through, for example, global climate change or ubiquitous pollution. This idea is straightforwardly reflected in offsetting approaches aiming to dissolve the contradictions between development and conservation, relying on the false idea that nature destruction because of economic development can continue endlessly and be compensated by restoring landscapes elsewhere (Maestre-Andrés *et al.* 2020). These ideas, furthermore, can inadvertently legitimize violent forms of conservation practice sedimented on discourses of urgency and crisis.

The idea of limits also invites conservationists to think about the scale in which we are aiming to tackle environmental challenges, and who is to be deemed responsible for conservation or degradation processes. For example, Fair (2021) acknowledges that consumer boycotts may be insufficient to shift the demand for specific

land uses and products that entail deforestation and resource degradation, such as palm oil. Seemingly, Bluwstein interrogates which actors are considered to govern and decide upon the configurations of landscapes in Europe and Africa, and how this is articulated through legal means (e.g. administrative jurisdictions) and economic and political powers. Building on Illich (Krauss 2021), a decolonial conservation principle would also ask: which actors and at which scale should set the limits to consumption, and to the expansion of conservation approaches that rely on exclusion, dispossession and which may not result in significant ecological benefits either?

5. Conclusion

To conclude, we stress that there is not a uniform approach to understanding and operationalizing the decolonization of biodiversity conservation. As there are distinct forms of understanding and operationalizing recognition depending on the school of thought (see Martin *et al.*, 2016) there can be differences over meaning and emphasis regarding the principles proposed for decolonizing biodiversity conservation among Indigenous and local peoples, scholars and practitioners. Despite such differences, we believe that decolonizing biodiversity conservation can result in subtler and less universalizing conservation approaches. The combination of recognition and reparation with plural ontologies and epistemologies, which defy narrow understandings of human-nature interactions and specific framings of the reasons and consequences of such interactions, can result in a more diverse canvas of conservation practices and knowledges, which defy Eurocentric panaceas entrenched in coloniality and subsumed to capitalism. These new practices should also involve the generation of new spaces of equitable and meaningful engagement that prevent harms and strive to ensure people have the capabilities to live with dignity, regardless of their identity and willingness to participate formally in conservation.

While we move in this direction, we hope that this Introduction and the collection of articles can inspire fruitful discussions among conservationists and spark new decolonial thinking and praxis worldwide. Advocates of decolonizing biodiversity conservation care about the fate of human and non-human species, and the conservation of the world's ecosystems and biomes. In fact, we have often studied the benefits and costs of biodiversity conservation initiatives, and we have come to the conclusion that these are insufficient to reverse the global environmental challenges we currently face, including biodiversity loss. They can be effective in, for example, generating local income, or preserving key environmental resources, in specific contexts at specific times, yet even such benefits can be sustained or contribute to reify inequities at local, national or international scales. We therefore regard the process of decolonizing biodiversity conservation as a way forward to develop new or revived human-nature relations that can expand rather than simplify biodiversity, the Earth's fabric of life, whilst contributing to dismantling the broader project of capitalism with its relentless propensity for technological fixes, economic growth and material accumulation.

References

- Adams, W. M. & Mulligan, M. (2002). *Decolonizing nature: Strategies for conservation in a post-colonial era*. Routledge.
- Al-Faham, H., Davis, A. M., & Ernst, R. (2019). Intersectionality: From theory to practice. *Annual Review of Law and Social Science*, 15: 247-265. <https://doi.org/10.1146/annurev-lawsocsci-101518-042942>
- Banerjee, S. & Sharma, S. (2021). En-gendering human-wildlife interactions in Northeast India: Towards decolonized conservation, *Journal of Political Ecology* 28(1), 1082-1100. <https://doi.org/10.2458/jpe.5217>
- Bluwstein, J. (2021). Colonizing landscapes/landscaping colonies: From a global history of landscapism to the contemporary landscape approach in nature conservation. *Journal of Political Ecology* 28(1), 904-927. <https://doi.org/10.2458/jpe.2850>
- Brondizio, E., Aumeeruddy-Thomas, Y., Bates, P., Carino, J., *et al.* (2021). Locally based, regionally manifested, and globally relevant: Indigenous and local knowledge, values, and practices for nature. *Annual Review of Environmental Resources*, 46: 481-509. <https://doi.org/10.1146/annurev-environ-012220-012127>
- Büscher, B., & Fletcher, R. (2020). *The conservation revolution: Radical ideas for saving nature beyond the Anthropocene*. Verso.
- Caruso, E., Schunko, C., Corbera, E., Ruiz Mallén, I., Vogl, C. R., *et al.* (2016). [Lessons for research policy and practice: The case of co-enquiry research with rural communities](#). *Journal of Research Practice*, 12: 1, M1.
- Coulthard, G. S. (2014). *Red Skin, White Masks: Rejecting the colonial politics of recognition*. University of Minnesota Press.
- Collins, Y. A., Maguire-Rajpaul, V. A., Krauss, J. E., Asiyambi, A. P., Jiménez, A., Mabele, M. B., & Alexander-Owen, M. 2021. Plotting the coloniality of conservation. *Journal of Political Ecology*, 28, 968-989. <https://doi.org/10.2458/jpe.4683>

- Cousins, J. J. (2021). Justice in nature-based solutions: Research and pathways. *Ecological Economics* 180, 106874. <https://doi.org/10.1016/j.ecolecon.2020.106874>
- Davis, J. (2019). Black faces, black spaces: Rethinking African American underrepresentation in wildland spaces and outdoor recreation. *Environment and Planning E: Nature and Space*, 2(1): 89-109. <https://doi.org/10.1177/2514848618817480>
- Fanari, E., (2021). Struggles for just conservation: An analysis of India's biodiversity conservation conflicts. *Journal of Political Ecology* 28(1), 1051-1081. <https://doi.org/10.2458/jpe.5214>
- Fair, H. (2021). Feeding extinction: Navigating the metonyms and misanthropy of palm oil boycotts. *Journal of Political Ecology* 28(1), 928-944. <https://doi.org/10.2458/jpe.3001>
- Guha, M, Gadgil, R. G. (1992). *This fissured land. An ecological history of India*. University of California Press.
- Illich, I. (1973). *Tools for conviviality*. Harper and Row.
- Kallis, G. (2019). *Limits. Why Malthus was wrong and why environmentalists should care*. Stanford University Press.
- Krauss, J. E., (2021). Decolonizing, conviviality and convivial conservation: Towards a convivial SDG 15, life on land? *Journal of Political Ecology* 28(1), 945-967. <https://doi.org/10.2458/jpe.3008>
- Maestre-Andrés S., Corbera E., Robertson M., & Lave R. (2020). Habitat banking at a standstill: The case of Spain. *Environmental Science and Policy* 109: 54-63. <https://doi.org/10.1016/j.envsci.2020.03.019>
- Mbembe, J. A., (2016). Decolonizing the university: New directions. *Arts and Humanities in Higher Education* 15 (1), 29-45. <https://doi.org/10.1177/1474022215618513>
- Martin, A., Dawson, N., Coolsaet, B., Corbera, E., *et al.* (2016) Justice and conservation: The need to incorporate recognition. *Biological Conservation*, 197: 254-261. <https://doi.org/10.1016/j.biocon.2016.03.021>
- McMichael, P. (2009) A food regime genealogy, *The Journal of Peasant Studies*, 36(1), 139-169. <https://doi.org/10.1080/03066150902820354>
- Mignolo, W. (2011). *The darker side of Western modernity: Global futures, decolonial options*. Duke Univ Press.
- O'Brien, W. E. (2015). *Landscapes of Exclusion: State parks and Jim Crow in the American South*. Library of American Landscape History.
- Pinderhughes, C. (2011). Toward a new theory of internal colonialism. *Socialism and Democracy*, 25(1), 235-256. <https://doi.org/10.1080/08854300.2011.559702>
- Requena-i-Mora, M. & Brockington, D., (2021). Seeing environmental injustices: The mechanics, devices and assumptions of environmental sustainability indices and indicators. *Journal of Political Ecology* 28(1), 1023-1050. <https://doi.org/10.2458/jpe.4765>
- Tuck, E. & Yang, K. W. (2012). [Decolonization is not a metaphor](#). *Decolonization: Indigeneity, Education and Society* 1(1), 1-40.
- Tuhiwai Smith, L. (2008). *Decolonizing methodologies: Research and indigenous peoples*. Zed.
- West, P., & Aini, J., (2018). Critical approaches to dispossession in the Melanesian Pacific: Conservation, voice, and collaboration. [Keynote Lecture](#) at the POLLEN 2018 Political Ecology Network Conference, Oslo.
- Wildcat, M. & Voth, D. (2023). Indigenous relationality: Definitions and methods. *AlterNative*, 19(2), 475-483. <https://doi.org/10.1177/11771801231168380>
- Youdelis, M., Townsend, J., Bhattacharyya, J., Moola, F. & Fobister, J. (2021). Decolonial conservation: Establishing Indigenous Protected Areas for future generations in the face of extractive capitalism. *Journal of Political Ecology* 28(1), 991-1022. <https://doi.org/10.2458/jpe.4716>