

This is a repository copy of *Exploring convivial conservation in theory and practice:* possibilities and challenges for a transformative approach to biodiversity conservation.

White Rose Research Online URL for this paper: https://eprints.whiterose.ac.uk/189236/

Version: Published Version

Article:

Massarella, K., Krauss, J. orcid.org/0000-0003-4593-0781, Kiwango, W. et al. (1 more author) (2022) Exploring convivial conservation in theory and practice: possibilities and challenges for a transformative approach to biodiversity conservation. Conservation and Society, 20 (2). pp. 59-68. ISSN 0972-4923

https://doi.org/10.4103/cs.cs 53 22

Reuse

This article is distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike (CC BY-NC-SA) licence. This licence allows you to remix, tweak, and build upon this work non-commercially, as long as you credit the authors and license your new creations under the identical terms. More information and the full terms of the licence here: https://creativecommons.org/licenses/

Takedown

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.



Conservation and Society 20(2): 59-68, 2022

Special Issue: Exploring Convivial Conservation in Theory and Practice

Exploring Convivial Conservation in Theory and Practice: Possibilities and Challenges for a Transformative Approach to Biodiversity Conservation

Kate Massarella^{a,#}, Judith E. Krauss^b, Wilhelm Kiwango^c, and Robert Fletcher^a

^aSociology of Development and Change Group, Wageningen University and Research, Wageningen, The Netherlands

^bInstitute for Global Sustainable Development, University of Sheffield, UK

^cGeography and Environmental Studies, University of Dodoma, Dodoma, Tanzania

*Corresponding author. Email: kate.massarella@wur.nl

Abstract

Convivial conservation has been put forward as a radical alternative to transform prevailing mainstream approaches that aim to address global concerns of biodiversity loss and extinction. This special issue includes contributions from diverse disciplinary and geographical perspectives which critically examine convivial conservation's potential in theory and practice and explore both possibilities and challenges for the approach's transformative ambitions. This introduction focuses on three issues which the contributions highlight as critical for facilitating transformation of mainstream conservation. First, the different ways in which key dimensions of justice — epistemic, distributive, and participatory and multi-species justice — intersect with the convivial conservation proposal, and how potential injustices might be mitigated. Second, how convivial conservation approaches the potential to facilitate human and non-human coexistence. Third, how transformative methodologies and innovative conceptual lenses can be used to further develop convivial conservation. The diverse contributions show that convivial conservation has clear potential to be transformative. However, to realise this potential, convivial conservation must avoid previous proposals' pitfalls, such as trying to 'reinvent the wheel' and being too narrowly focused. Instead, convivial conservation must continue to evolve in response to engagement with a plurality of perspectives, experiences, ideas and methodologies from around the world.

Keywords: convivial conservation; biodiversity conservation; transformative justice; human-wildlife coexistence; transformative methodologies

INTRODUCTION: TRANSFORMATIVE CHANGE AND CONVIVIAL CONSERVATION

We are living in a time of widespread anxiety about the state of our planet, in relation to issues including climate change, social injustice, ecosystem degradation, and biodiversity loss.

Access this article online	
Quick Response Code:	Website: www.conservationandsociety.org.in
	DOI: 10.4103/cs.cs_53_22

These issues are largely driven by human activity, leading to many labelling the current epoch 'the Anthropocene' (Lorimer 2015). Growing concerns about global biodiversity loss have led many in the conservation community—conservationists, academics, governments officials, and civil society groups—to call for radical transformation in biodiversity conservation policy and practice (IPBES 2019; Wyborn et al. 2020). Transformation can be defined as a "substantial, profound and fundamental change, which requires a paradigm shift in how we relate to and manage the environment" (Massarella et al. 2021: 79). Such a shift requires moving away from approaches to transformation that O'Brien et al. (2013) label as 'circular' (implementing new ideas within existing power structure) and towards those labelled as 'axial' (fundamentally challenging the status quo).

Copyright: © Massarella et al. 2022. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use and distribution of the article, provided the original work is cited. Published by Wolters Kluwer - Medknow, Mumbai | Managed and supported by the Ashoka Trust for Research in Ecology and the Environment (ATREE), Bangalore. For reprints contact: WKHLRPMedknow reprints@wolterskluwer.com

A range of proposals to transform biodiversity conservation have been put forward, advocating for differing goals and means of transformation. One popular proposal, often termed 'half earth' or 'nature needs half', is to dramatically increase terrestrial and marine protected areas so that they cover at least half of the earth (Locke 2014; Wilson 2016; Dinerstein et al. 2017). The closely aligned 30 by 30 proposal, which advocates for 30% of land and sea to be in some form of protection by 2030 (Waldron et al. 2020), was endorsed as a global target at the 2021 IUCN World Conservation Congress and is central to the drafted Convention on Biological Diversity (CBD) post-2020 global biodiversity framework (CBD Post-2020 working group 2021). Another popular proposal, which is often referred to as 'new conservation', aims to integrate conservation and human development concerns by conceptualising a 'post-wild' world that embraces technological innovation and market-based approaches to natural resource governance (Marris 2013; Marvier 2014).

These proposals have, however, been critiqued for not sufficiently addressing the underlying issues inherent to historical and contemporary conservation approaches that have contributed to injustices and may impede axial transformation. Critiques include a failure to sufficiently protect the rights of Indigenous peoples and local communities affected by conservation (Schleicher et al. 2019; Kashwan et al. 2021; Krauss 2022); not adequately addressing the growing militarisation of conservation (Duffy et al. 2019) that reinforce rather than dismantle problematic divisions between people and non-human nature; and the continued promotion of conservation ideas that have their roots in colonial conservation practices, prioritise western science, and perpetuate top-down modes of governance (Mbaria and Ogada 2016; Kothari et al. 2019; Domínguez and Luoma 2020).

Convivial conservation has been proposed as a radical alternative to the half earth and new conservation proposals to address the aforementioned critiques and offer a socially just, democratic, and inclusive form of biodiversity governance that aims for axial transformation (Büscher and Fletcher 2020). Inspired by decolonial, youth and Indigenous movements, convivial conservation aims to foreground social justice in conservation efforts, highlight the importance of attending to how global political and economic systems drive biodiversity destruction, and challenge the human-nature dichotomy prevalent in conservation efforts that aim to preserve an idealised 'wilderness' separated from humans (Büscher and Fletcher 2019, 2020). Convivial conservation calls for structural change in the current global economic model and the inequalities it creates—both among people and between humans and non-humans (ibid.). Büscher and Fletcher (2020) link the convivial conservation concept with other complementary proposals for axial transformation in biodiversity governance, such as radical ecological democracy (Kothari 2014) and Territories of Life (ICCA Consortium 2021).

The convivial conservation vision encompasses five elements of transformative action (Büscher and Fletcher 2019, 2020). First, it calls for a fundamental shift away from

a focus on protected areas that separate humans and nonhumans, towards a focus on promoted areas, which encourage human frequentation and sustainable use. Second, it proposes a discursive shift away from needing to 'save nature' from people and towards recognising and celebrating human and non-human nature as integral elements of an overarching whole. Third, it advocates long-term engagement with biodiversity instead of short-term touristic voyeurism of wildlife in protected areas. Fourth, it questions the promotion of nature as spectacle and instead champions interactions with everyday nature. Fifth, it calls for a shift from the privatised expert technocracy that dominates conservation decision-making at international and national levels towards common democratic engagement and devolved governance that prioritises Indigenous and community groups. Translating these elements into practical measures, convivial conservation proposes: 1) conservation spaces that integrate rather than separate humans and other species; 2) direct democratic governance arrangements that challenge elite technocratic management; and 3) novel finance arrangements that redistribute existing wealth and resources.

However, aside from the initial proposition and theorisation by Büscher and Fletcher (2020) and engagement by some practitioners and scholars (DeVore et al. 2019; Collins 2021; Collins et al. 2021; Dunlap 2020; Krauss 2021; Toncheva and Fletcher 2021), convivial conservation remains nascent in its conceptualisation and practical development. As such, this special issue critically engages with the idea of convivial conservation and its potential to radically transform biodiversity conservation, guided by two questions: 1) What are the potentials and the pitfalls of convivial conservation as a transformative approach to conservation? And 2) How can convivial conservation be developed and expanded in theory and practice? The contributions to the special issue focus on human-wildlife interactions, which is a central issue in debates about transforming biodiversity conservation in the Anthropocene more broadly (Lorimer 2015). Authors from diverse backgrounds, with expertise in different contexts and disciplines, draw on a wide range of case studies to contribute both empirical and conceptual reflections on the convivial conservation proposal.

This special issue introduction provides an overview of the overarching themes emerging from the individual contributions in order to develop discussions about the potential for convivial conservation to be a transformative approach to biodiversity conservation. It focuses on three critical issues raised by the contributors that centre on: 1) exploring how justice can be better conceptualised in convivial conservation in order to be transformative; 2) unpacking the concept of human and non-human coexistence; and 3) identifying and developing methodologies for investigating and facilitating transformative change in conservation research and practice. Drawing on our three themes, we conclude by offering some recommendations for expanding the transformative potential of the convivial conservation approach.

CONVIVIAL CONSERVATION AND TRANSFORMATIVE JUSTICE

Justice is a contested term comprising several divergent dimensions (Svarstad and Benjaminsen 2020). When characterising different visions of transformative change in biodiversity conservation, Massarella et al. (2021) identify convivial conservation as a 'just transformation' approach. The goal of just transformation is to radically shift conservation research, policy and practice in a way that pays particular attention to issues of power, addresses historical and contemporary injustices, and questions who is recognised and who gets to participate in knowledge production and decision-making (Temper et al. 2018; Alvarez and Coolsaet 2020; Mabele 2020; Martin et al. 2020). The concept of just transformation aligns with the idea of transformative justice, which is characterised by a shift away from affirmative action (e.g., making policy changes to increase representation of marginalised groups in decision-making) towards transformative action (e.g., questioning the power structures and assumptions that exclude these groups in the first place) (Fraser 2009; Temper 2019).

Although Büscher and Fletcher (2019, 2020) situate justice as central to the convivial conservation proposal, they do not explicitly define it nor engage with different conceptualisations of justice and its role in transformative change. Several contributors to this special issue address this gap by engaging explicitly with different notions of justice to further develop convivial conservation as a transformative approach. Contributors focus on epistemic, participatory and multi-species justice, and distributive justice, which broadly resonate with Schlosberg's (2004) idea of thinking about environmental justice in terms of three central 'pillars' of recognition, participation and distribution. We have thus organised our subsequent discussion around these notions.

Epistemic justice

Despite moves towards rights-based approaches and increased visibility of Indigenous peoples and local communities in discussions and discourses, conservation is still primarily based on, and driven by, the ideologies of Global North institutions, which routinely invoke western science to define global biodiversity crises, propose what they consider new and innovative solutions, and often exclude other forms of knowledge (Kothari 2021). This results in what is defined as epistemic injustice, whereby certain knowledge and worldviews are prioritised and dominant knowledge systems are imposed over others (Escobar 2010; Widenhorn 2013). Epistemic struggles are at the heart of social struggle, as well as struggles over 'the environment', and so transformative approaches to conservation must question hegemonic worldviews while making visible other ways of knowing, forms of politics, and modes of environmental governance (Icaza and Vázquez 2013; Temper and Del Bene 2016).

The intention of convivial conservation is to engage with the worldviews of Indigenous peoples and local communities living in biodiverse spaces, which often transcend the nature-culture dualism central to western epistemology and the fortress conservation approach (Büscher and Fletcher 2019). However, as Kothari (2021) argues, many innovative 'whole earth' approaches fall short of being truly transformative as they are still grounded in academic thought emerging from the Global North. To facilitate just transformations, convivial conservation should therefore "embrace the idea that a variety of knowledge configurations exist, going beyond those recognised by academia" (Álvarez and Coolsaet 2020: 63).

In her exploration of human-gorilla interactions at Bwindi Impenetrable National Park in southwestern Uganda, Ampumuza (this issue) identifies a wide range of injustices perpetrated against the Indigenous Batwa people in the name of gorilla conservation. She argues that many of these injustices are rooted in western scientific knowledge, values and perspectives guiding conservation programmes, including the labelling of the knowledge of the Batwa people accrued over centuries as too unscientific. She also argues that convivial conservation proponents should be explicit about how to tackle epistemic injustice driven by the dominance of western-led conservation science. Similarly, through her study of human-wildlife conflict and coexistence in Akagera National Park in Rwanda, Hsiao (this issue) highlights how conservation approaches grounded in western scientific knowledge and practices reinforce both human-nature dichotomy and the commodification of non-human life, which contribute to biodiversity loss and the erosion of traditional ecological knowledge.

Highlighting the continued influence of colonial legacies in conservation (Mbaria and Ogada 2016; Collins et al. 2021), Mabele et al. (this issue) argue for the need to be 'epistemically disobedient' (Mignolo 2011: 54) and challenge the dominant modes of problem framings of western science and the values and epistemologies of large conservation organisations by drawing on alternative philosophies that align with local values and ways of knowing the world. They discuss how embedding conservation in southern Africa in Ubuntu philosophy could act as a powerful tool for grounding justice issues—and conservation more broadly—in traditional worldviews, values, and notions of justice. Bocci (this issue) makes a similar argument for the Galapagos islands by showing how local farmers identify with the cultural philosophy of arraigo (belonging), which stands in stark contrast to the dominant framing of Galapagos as an inhospitable place that is visited only for tourism and research.

Putting epistemic justice at the heart of convivial conservation also includes learning from spaces in which people and large carnivores coexist, such as between humans and wolves in north-western Spain (Pettersson et al., this issue) and between humans and bears in the Rodopi Mountains of Bulgaria (Toncheva et al., this issue). It further involves learning from situations in which humans and animals have evolved together and have adopted informal institutional arrangements that

enable coexistence (Ampumuza, this issue; van Bommel and Boonman-Berson, this issue; Toncheva et al., this issue). Convivial conservation can also learn from existing governance structures in spaces where social and ecological well-being are considered inseparable, and coexistence is driven by a desire for mutual care and justice, as in Territories of Life (Hsiao and Le Billon 2021; Hsiao, this issue), as well as from the experiences of implementing progressive laws such as the Recognition of Forest Rights Act (FRA) in India (Pandya, this issue).

In his study of the Crăciunel commons in Romania, Iordăchescu (this issue) argues for explicitly recognising and building on the approach to governance of local communities that combines sustainable use with conservation and rejects free-market logics and western framings of nature-culture relationships. He points out that it is also necessary to be open to the fact that conservation, as conceptualised and advocated by scientists or international organisations, may not always be the priority of indigenous peoples and local communities. Bocci (this issue) and Fiasco and Massarella (this issue) further highlight the potential risk of alternative and potentially transformative ideas, such as *Buen Vivir* and coexistence (discussed in more detail below), becoming vehicles for reinforcing the status quo if not sufficiently pluralised and politicised.

Participatory and multi-species justice

Participatory justice, which is sometimes referred to as procedural justice, is concerned with meaningful involvement of different people in decision-making around a certain issue or mode of governance (He and Sikor 2015). Despite its transformative roots and increasing focus in conservation policy and practice, 'participation' has become another buzzword, with the focus often on affirmative techniques that do not meaningfully engage local people (Leal 2007). Convivial conservation instead advocates transformative approaches to participatory justice towards "deeply participatory forms of engagement in which local actors are placed at centre stage" (Büscher and Fletcher 2019: 10). Its goal is to challenge the official narratives that present local communities as core problems for conservation and instead balance local people's active role in conservation decision-making with the awareness of wider political economic factors shaping their experiences. However, what this would look like in practice requires further elaboration, as this issue's contributors point out.

Bocci (this issue) advances the idea of democratic engagement by investigating the participation of local people living on the Galapagos Islands in conservation decision-making. He argues that making participation just, meaningful, and transformative requires continuous involvement of local people, re-framing of the relationship between humans and non-humans, recognition of different worldviews and values, and a shift from focusing on individuals to focusing on overarching political contexts. He also highlights the heterogeneous nature of local people and the dangers of framing them as either victims or villains.

The issue of framing is also emphasised in the contributions by Hsiao (this issue), Ampumuza (this issue), and Kiwango and Mabele (this issue). In their work on human-bear interactions in the Rodopi Mountains in Bulgaria, Toncheva et al. (this issue) further highlight the need for participation to go beyond engagement in top-down initiatives, and instead design initiatives from the bottom up, to facilitate humanwildlife coexistence. Pettersson et al. (this issue) echo this in relation to human-wolf coexistence in north-western Spain, challenging the continued focus on top-down initiatives and instead advocating for participatory approaches that build on local ecological knowledge. Similarly, Iordăchescu (this issue) emphasises the importance of building on local custodians' skills, knowledge and practices to enrich prospects for convivial conservation, while Mabele et al. (this issue) argue that decision-making must be devolved to local people to transform governance practices.

Several contributors address the issue of how convivial conservation might meaningfully address multi-species justice by incorporating non-human participation in the vision. Büscher and Fletcher (2020) advocate a transcendence of the human-nature dichotomy that often drives conservation policy and practice (i.e. adjusted to fit singular 'dichotomy'). Their focus on justice in relation to non-humans is linked explicitly to the ways in which capitalism alienates both humans and non-humans, yet they assert the need to retain a privileged focus on human action and responsibility for an effective conservation politics. However, contributors to this special issue encourage more consideration and incorporation of non-human perspectives and further engagement with the ontological, epistemological, and methodological implications of doing so. Whether in relation to wolves in Spain (Pettersson et al., this issue), mountain gorillas in Uganda (Ampumuza, this issue), or bears in Bulgaria (Toncheva et al., this issue), the contributions identify myriad ways that humans and animals continuously co-adapt their behaviour to coexist.

Based on their experiences of conducting research on and with animals in a range of countries and contexts, van Bommel and Boonman-Berson (this issue) challenge convivial conservation to be more systematic in the inclusion of non-human perspectives. Drawing on scholars like Bastian et al. (2016) and Haraway (2013), they argue that non-humans must be treated as subjects (rather than objects) of conservation, and that human exceptionalism should therefore be challenged. Hsiao (this issue) argues for an emphasis on 'positive ecological peace', which targets underlying drivers of conflict such as the cultural violence of separating humans and non-humans physically and conceptually, thus shifting from affirmative notions of participation to transformative ones.

Distributive justice

Simply put, distributive justice focuses on the uneven distribution of conservation benefits and harms (Mabele 2020). Several propositions about how to address distributive justice put forward by Büscher and Fletcher (2019) are critically

engaged with by several contributors. In exploring the potential for advancing transformative conservation in Southern Africa, Mabele et al. (this issue) raise several questions related to the idea of 'promoted' conservation areas (Büscher and Fletcher 2020), particularly the legal and regulatory frameworks that would need to be applied. Mabele at al. (this issue) ask who would own the land, what kinds of access and usage rights would be provided for local communities, how would a just distribution of costs and benefits be established, and how would dispute be settled about what is (not) permissible in 'promoted' areas? Pandya (this issue) raises a similar concern regarding land rights in her study of the Corbett Tiger Reserve in India by pointing out the diverse types of landholding statuses of communities living in the vicinity of the Reserve and how these form micro-political environments that produce uneven distribution of conservation benefits across intersecting lines of gender, caste, and social class.

In the convivial conservation proposal, Büscher and Fletcher (2020) identify the tourist industry as driving a number of conservation injustices, which is supported by several contributions to this special issue. Bocci (this issue) highlights the embeddedness and dominance of tourism interests in conservation in the Galapagos Islands, often to the disadvantage of resident farmers who are more committed to landscape conservation. Pandya (this issue) discusses how the tourism market of Corbett Tiger Reserve has created tourism-based dependencies and differences in access to jobs and other economic opportunities for land-owning and landless households across class, caste and gender divisions.

In response to some of the challenges of the international tourism industry, Büscher and Fletcher (2020) advocate 'engaged visitation' as opposed to 'touristic voyeurism'. Kiwango and Mabele (this issue) argue that such a proposal might only be applicable to countries in the Global North. They explain that conservation in countries like Tanzania is driven by 'path dependencies' established during colonial times that are characterised by a reliance on international tourism, itself mainly grounded in nature-based attractions. Such attractions are, in turn, conserved through the protected area approach with all its challenges. They point out the significance of protected areas for Tanzania's foreign exchange earnings from international tourism and note that the revenues derived from short-term international tourists visiting protected areas to view charismatic megafauna without the presence of local communities is far higher than income earned from domestic tourists. The national government, conservation agencies, park management authorities, officials, and local communities rely on the international tourism revenue to fund national development projects and protect and expand wildlife conservation areas. All of these issues would therefore need to be addressed and transformed to make the idea 'engaged visitation' a possibility in contexts such as this.

Toncheva et al. (this issue) provide a contrasting situation in the Rodopi Mountains in Bulgaria where a small, locally established tourism industry has emerged around the local brown bear population. They demonstrate how this wildlife tourism has developed organically and encourages visitor engagement in ways that benefit both local communities and brown bear conservation. In his study of the Crăciunel commons in Romania, Iordăchescu also identifies the early stages of a locally-developed tourism industry around protected areas that is more just and inclusive because it is rooted in local priorities.

Alternative finance mechanisms are proposed as a component of convivial conservation to address conservation injustices. One such proposal is conservation basic income (CBI): a regular, unconditional payment to community members living in or near biodiversity-critical areas to facilitate their adoption of conservation-friendly livelihoods (Fletcher and Büscher 2020). Several special issue contributors explore the potential to develop such mechanisms. While supporting the idea of alternative financing, Kiwango and Mabele (this issue) highlight the need to ensure that a mechanism such as CBI does not result in excessive economic valuation of wildlife and thereby contribute to perverse outcomes and further injustices. They argue instead for a 'community-based conservation insurance' scheme that subsidises farmers and herders for injustices caused by protected area conservation. This, they argue, would need to go hand in hand with decriminalisation of livestock herding and the recognition that households in rural communities routinely bear the costs of conservation interventions.

Ampumuza (this issue) also points out that while CBI may align with sharing principles held by Indigenous communities like the Batwa in Uganda, such mechanisms may risk further marginalisation by focusing too much on economic benefits and further positioning these communities as recipients. Hsiao (this issue) warns of the potential for financial mechanisms more broadly to contribute to further commodification of nonhumans. Iordăchescu (this issue) endorses the proposal for direct payments to members involved in managing commons but remains cautious about the long-term viability of external funding. Overall, the contributors point out that alternative finance mechanisms such as CBI are unlikely to result in transformative distributive justice if national and regional political economic contexts and local power relations are not taken into consideration (Hoang et al. 2019).

Büscher and Fletcher (2020) also advocate for historical reparations to compensate for past injustices caused by conservation interventions. This recommendation echoes other calls for reparations—via, inter alia, land tenure and access rights-to compensate Indigenous peoples and local communities for long histories of exclusion through protected area formation (Zurba et al. 2019). Büscher and Fletcher (2019) acknowledge that identifying who should receive reparations and how they should be distributed is a complex issue. As Ramutsindela and Shabangu (2018) show, processes of restitution are often extremely politicised and onerous for historically marginalised groups and do not automatically result in reparative justice for all members. Several contributors highlight these complexities while broadly endorsing the need to address historical reparations appropriate to the socio-political and cultural contexts. Hsiao (this issue) notes

that historical reparations should not only address past actions of dispossession, but also the continuing impacts of cultural and slow violence in the present. Ampumuza (this issue) and Mabele et al. (this issue) also support the notion that reparations must address continued injustices perpetuated by the sustained focus on protected areas and exclusionary scientific approaches with colonial roots. Finally, Pandya (this issue) highlights the importance of attending to micro-politics as a pre-requisite for such reparations.

UNPACKING 'COEXISTENCE' IN CONVIVIAL CONSERVATION THEORY AND PRACTICE

Human-wildlife coexistence is central to the convivial conservation vision and is reflected in the proposed elements of promoted areas and integrated landscapes, among others. Coexistence is considered to be a core element of transformative change in biodiversity conservation more broadly (Hazzah et al. 2019), yet the idea has been conceptualised in different ways. In their study of coexistence in theory and practice, Fiasco and Massarella (this issue) show that the term has become another conservation buzzword and is often used without in-depth consideration of its meaning. Fiasco and Massarella argue that although coexistence has the potential to be a transformative concept, it often manifests in practice as 'standardised packages' of apolitical tools. They therefore note, along with other contributors (Ampumuza, this issue; van Bommel and Boonman-Berson, this issue; Hsiao, this issue; Pettersson et al., this issue), that convivial conservation needs to further elaborate and flesh out the concept of coexistence.

Pettersson et al. (this issue) frame coexistence as a "state in which people are able to live equitably and sustainably with wildlife, and where conservation efforts are carried out within the context of wider societal challenges." Their ethnographic study finds that most clashes between people and wolves result from a mismatch between local values and those being imposed from the outside, as well as the unjust and unequal distribution of burdens and benefits in wolf conservation. They propose that centring local communities in knowledge production and management practices, which both recognise these communities as environmental stewards and compensate them accordingly, can contribute towards a re-framing of wolf conservation from species-based protection to the shared, justice-based 'living landscapes' which convivial conservation supports. Fiasco and Massarella (this issue) support this call to better link coexistence with justice and wider political economic and social contexts, identifying the potential contribution of convivial conservation to advance a concept of 'meaningful coexistence' that focuses on the broader relationships between humanity, capitalism and wildlife. However, van Bommel and Boonman-Berson (this issue) challenge the continued emphasis in convivial conservation on the human in human-wildlife coexistence by asking whether coexistence has any real meaning when it continues to separate humans and non-humans.

Although coexistence may be the latest conservation buzzword, it is something that has been practised for centuries in many places throughout the world. Many authors have expressed concern that more traditional practices that facilitate coexistence may be lost or side-lined unless conscious effort is made to unpack and learn from the myriad socio-cultural, political, economic and historical factors that keep them alive (Mwamidi et al. 2012; de Silva and Srinivasan 2019). Pettersson et al. (this issue), Toncheva et al. (this issue), and van Bommel and Boonman-Berson (this issue) demonstrate how human-wildlife coexistence has developed organically over time in landscapes that have not been subject to a large degree of external intervention. Conversely, Kiwango and Mabele (this issue), and Ampumuza (this issue) show how decades of external intervention in the name of conservation has disrupted human-wildlife coexistence and devalued local coexistence practices and knowledge. Kiwango and Mabele (this issue), and Hsiao (this issue) also show how human migration caused by conflict and political-economic processes create new contexts for human-wildlife coexistence. Hsiao further demonstrates that place-based traditional ecological knowledge cannot always be assumed, and that conceptualisations of coexistence need to move past the idea of communities as homogenous entities that either coexist in whole or not at all. All contributors agree that coexistence is never a static state, nor is it always peaceful and free from conflict.

TRANSFORMATIVE METHODOLOGIES AND CONVIVIAL CONSERVATION

The contributions to this special issue emphasise that methodology is an important tool for facilitating transformative change (Shrivastava et al. 2020). Despite convivial conservation's emphasis on incorporating insights from natural and social sciences (Büscher and Fletcher 2019, 2020), contributors to this collection demonstrate that precisely what this means in terms of methodology, epistemology, and ontology, both across different scholarly disciplines and in collaboration with diverse knowledge holders, requires further elaboration. Van Bommel and Boonman-Berson (this issue) assert that since research is performative, it is critically important that it does not reproduce and reinforce the human-nature dichotomy that convivial conservation proposes to overcome. They identify the 'threshold concepts' of affect, embodiment, and multisensory communication as methods to better incorporate non-human actors into research processes. Ampumuza (this issue) and Mabele et al. (this issue) advocate developing research methodologies that draw on Indigenous and traditional philosophies, values, and ways of knowing. Multiple studies (Bocci, this issue; Hsiao, this issue; Kiwango and Mabele, this issue; Pandya, this issue; Toncheva et al., this issue; and van Bommel and Boonman-Berson, this issue) reinforce the importance of combining ethnography and extended engagement with 'situated knowledge' in different landscapes.

The contributors bring diverse analytic lenses to engage critically with and contribute to the convivial conservation vision and practice. Ampumuza (this issue), Kiwango and Mabele (this issue), and Mabele et al. (this issue) present convincing arguments for methodologies based on decolonial deconstruction (Murove 2012; Tamale 2020) of both conservation and research practice. Pandya (this issue) uses intersectional theory and feminist political ecology to frame a methodological approach for analysing the micro-politics of land ownership and livelihood opportunities for households living near wildlife reserves. Hsiao (this issue) demonstrates the value of a peace studies lens to convivial conservation thinking, while Toncheva et al. (this issue) show the complementarity between convivial conservation and a 'constitutionality' (bottom-up self-governance by community groups) approach (Haller 2020). Fiasco and Massarella (this issue) demonstrate how a science and technology studies (STS) lens can unpack processes of transformative change. Van Bommel and Boonman-Berson (this issue) show how a more-than-human theoretical lens enables collaborations across natural and social sciences to analyse intersubjectivity among non-human and human actors in conservation research. Pettersson et al. (this issue) advocate collaborative social and natural science approaches for developing integrative methodologies that focus on 'biocultural diversity', while Ampumuza (this issue), Iordăchescu (this issue), and Toncheva et al. (this issue) demonstrate the benefit of prioritising local knowledge and lived experiences in knowledge production.

CONCLUSIONS: MOVING CONVIVIAL CONSERVATION FORWARD IN THEORY AND PRACTICE

By drawing together the diverse contributions to this special issue, across varied backgrounds, disciplines and areas of expertise, we can offer concrete suggestions for how to move convivial conservation forward in both theory and practice around the three themes of justice, coexistence, and transformative methodologies. In relation to justice, it is clear that further engagement with epistemic justice is needed (Ampumuza; Kiwango and Mabele; Mabele et al. all this issue) given convivial conservation's roots in the Global North (Krauss 2021). Explicit engagement with how to address injustices perpetrated historically or currently in the name of western-based conservation science is needed, and care must be taken to ensure that convivial conservation does not become another top-down initiative that side-lines voices from the Global South (Kothari 2021). Engagement with epistemic justice in convivial conservation encourages iterative, bottom-up listening to build more integrated understandings of mutual care in living landscapes: by learning from existing practices of coexistence, governance structures and non-western ontologies, and from supporting grassroots movements as opposed to speaking on their behalf (ibid.).

Epistemic justice closely links with both participatory and multi-species justice, and contributors highlight firstly the need for continuous participation and engagement of local people (Ampumuza; Bocci; Hsiao; Iordăchescu; Kiwango and Mabele; Mabele et al.; Pettersson et al.; Toncheva et al., all this issue). Participation must, however, be transformative as opposed to affirmative (Fraser 2009), focusing on challenging top-down structures of power and knowledge and instead building on local custodians' and stewards' skills. Diverse contributors equally emphasise the importance of addressing multi-species justice in convivial conservation, encouraging incorporation of non-human perspectives as well as engaging further with the ontological, epistemological and methodological implications of doing so (Ampumuza; van Bommel and Boonman-Berson; Hsiao; Pettersson et al.; Toncheva et al., all this issue). In practice, this includes further engagement with threshold concepts linked to multi-species justice, such as valuing embodied knowing and other ways of knowing/communicating with non-human nature (Barrett et al. 2017).

In terms of distributive justice, contributors highlight a need for more elaboration on how to implement promoted areas in terms of rights, burdens and benefits (Mabele et al.; Pandya both this issue). Although support for the idea of promoted areas is evident, it is clear that more consideration of the practicalities of the idea is needed. This would involve, among other things, micro-political analysis of how costs and benefits are distributed across intersecting lines of gender, ethnicity, caste and social class. While contributors agree that alternative finance mechanisms such as a conservation basic income could offer a much-needed alternative to neoliberal, market-based funding mechanisms, it is important for these not to perpetuate excessive valuations of wildlife and injustices, reliance on external funding, and further commodification of wildlife (Ampumuza; Hsiao; Iordăchescu; Kiwango and Mabele, all this issue). There is also broad concern with how to make alternative finance mechanisms for conservation viable outside of welfare states in the Global North. Therefore, we recommend that attempts to further advance alternative finance mechanisms as part of the convivial conservation approach are implemented in close consultation with partners in the Global South.

The convivial conservation proposals of shifting from touristic voyeurism to engaged visitation and historical reparations are also broadly supported by the contributors in this special issue and the potential for both to facilitate transformative justice is highlighted. Challenges are, however, highlighted in relation to putting both of these ideas into practice in a way that is feasible and in a way that facilitates transformative justice. In relation to shifting from touristic voyeurism to engaged visitation, challenges link to a dependence in some Global South countries on foreign exchange earnings, vested interests prioritising tourists over farmer residents, and the power inherent in distributing economic opportunities through tourism (Bocci; Kiwango and Mabele; Pandya, this issue). Contributions in this special issue also show that organically evolved wildlife tourism can also benefit local residents and conservation and so tourism should not be discounted completely in a convivial model of conservation (Iordăchescu, Toncheva et al., both this issue). Regarding historical reparations, it is clear that this must also be done in accordance with, and consideration of, local

contexts and micro-politics and that it must not be assumed that its justice outcomes will match its intentions (Ramutsindela and Shabangu 2018).

One solid step that could be taken to facilitate transformative justice and address some of the potential epistemic participatory and distributive injustices highlighted in this special issue is to engage meaningfully with alternative governance models grounded in local philosophies, such as arraigo (belonging) (Bocci, this issue) or *Ubuntu* (Mabele et al., this issue). Much can be learnt from the myriad alternative ways of governing nature that do not rely on western scientific knowledge, that prioritise place-based and collaborative approaches, and that provide a basis for non-market, redistributive sources of locally controlled conservation funding (Escobar 2018; Kothari et al. 2019). Engagement with alternative philosophies will also support the re-framing of Indigenous peoples and local communities as knowledge producers as opposed to just beneficiaries of conservation governance and funding schemes (Tauli-Corpuz 2010).

In relation to the idea of coexistence, contributors show that care must be taken to critically engage with terms and concepts that are at the heart of the convivial conservation proposition (Ampumuza; van Bommel and Boonman-Berson; Fiasco and Massarella; Hsiao; Iordăchescu; Pettersson et al., all this issue). Buzzwords, such as coexistence, often have their roots in transformative thinking but can lose their transformative potential easily (Chandhoke 2007) so there is a need for convivial conservation to better flesh out its interpretation of coexistence in theory and practice. This need links intimately with the previously-explained calls by contributors for bottom-up learning from existing practices of human and non-human coexistence. However, there is a distinct difference between contexts where human-wildlife practices have evolved organically without large-scale external intervention, and those where external intervention and political-economic processes disrupt local practices and knowledges. This reinforces our recommendation that convivial conservation proponents engage with some of the many different framings and practices of coexistence that can already be identified (Dorresteijn et al. 2014; de Silva and Srinivasan 2019; Hussain 2019; König et al. 2020) and situate this bottom-up learning within an understanding of wider relationships between humanity, capitalism and wildlife (Komi 2021). Two additional aspects of coexistence requiring further exploration in convivial conservation are how to move beyond an abiding focus on the 'human' in human-wildlife coexistence and to explore the potentials for coexistence between humans given the social, political, economic and ecological factors encouraging both conviviality and conflict.

Diverse contributors emphasise the need for convivial conservation to further flesh out appropriate research methodologies (Ampumuza; Bocci; van Bommel and Boonman-Berson; Iordăchescu; Kiwango and Mabele; Pandya; Toncheva et al., all this issue). Building on justice and coexistence-related principles, this involves drawing respectfully on Indigenous and traditional values and ways of

knowing. In terms of research methods, contributors support use of ethnographic methods in pursuit of situated knowledge, including efforts to approach non-humans in more equal term (Bastian et al. 2016). In line with discussions within this special issue, we also recommend combining convivial conservation thinking with other diverse schools of thought (e.g., decolonial deconstruction, feminist political ecology, constitutionality, and science and technology studies). Pairing convivial conservation with such diverse approaches, including those which, at first, may not appear to present a wholly comfortable fit, can help enrich the discussion. Focusing on transformative methodologies also calls for integrated approaches that draw on natural and social-science approaches (Pooley et al. 2020) and incorporate a range of local, Indigenous and non-western forms of knowledge (Zanotti et al. 2020).

In summary, the contributions to this special issue show that the convivial conservation approach has the potential to radically transform existing approaches to biodiversity conservation while also signalling some of the potential barriers that it will need to overcome to do so. It is important that convivial conservation stays open and continues to evolve in response to a plurality of ideas and perspectives. One of the common pitfalls of 'radical' proposals is the tendency to 'reinvent the wheel' when there are already myriad ideas, practices and initiatives grounded in the knowledge and experiences of different peoples, natures and spaces (Büscher and Fletcher 2020). By learning from such experiences of biocultural conviviality, and drawing on insights offered in this special section, convivial conservation may well have the potential to contribute to a just and (axially) transformative approach to biodiversity conservation in the Anthropocene. Learning across the dimensions of justice, coexistence and methodologies outlined in this overview will be vital in this process and we hope that diverse researchers, practitioners, and activists will continue to critically engage with convivial conservation going forward.

ACKNOWLEDGEMENTS AND FUNDING

The coordination of this special issue and the writing of the introduction is supported by the NORFACE and Belmont Forum Transformations to Sustainability Joint Research Programme Project #949 Towards Convivial Conservation: Governing Human-Wildlife Interactions in the Anthropocene (CONVIVA). We would like to extend our gratitude to all the contributors in this special issue and the management and editorial team at Conservation and Society.

Conflicting Interest: None.

REFERENCES

Álvarez, L. and B. Coolsaet. 2020. Decolonizing environmental justice studies: a Latin American perspective. *Capitalism Nature Socialism* 31(2):50–69.

Barrett, M.J., M. Harmin, B. Maracle, M. Patterson, C. Thomson, M. Flowers, and K. Bors. 2017. Shifting relations with the more-than-human: six threshold concepts for transformative sustainability learning. *Environmental Education Research* 23(1):131–143.

- Bastian, M., O. Jones, N. Moore, and E. Roe. 2016. *Participatory research in more-than-human worlds*. London: Routledge.
- Büscher, B., and R. Fletcher. 2019. Towards convivial conservation. Conservation and Society 17(3): 283.
- Büscher, B., and R. Fletcher. 2020. The conservation revolution: radical ideas for saving nature beyond the anthropocene. New York, NY: Verso Trade.
- CBD Post-2020 working group. 2021. First draft of the post-2020 global biodiversity framework. UN Environmental Program, Convention on Biological Diversity.
- Chandhoke, Neera. 2007. "Civil society." Development in Practice 17 (4–5):607–614.
- Collins, Y.A. 2021. Book review. Bram Büscher and Robert Fletcher, the conservation revolution: radical ideas for saving nature beyond the anthropocene. Antipode 53.
- Collins, Y.A., V. Maguire-Rajpaul, J.E. Krauss, A. Asiyanbi, A. Jiminez, M.B. Mabele, and M. Alexander-Owen. 2021. Plotting the coloniality of conservation. *Journal of Political Ecology* 28(1).
- de Silva, S. and K. Srinivasan. 2019. Revisiting social natures: people-elephant conflict and coexistence in Sri Lanka. Geoforum 102: 182–190.
- DeVore, J., E. Hirsch, and S. Paulson. 2019. Conserving human and other nature: a curious case of convivial conservation from Brazil. Anthropologie et Sociétés 43.
- Dinerstein, E., D. Olson, A. Joshi, C. Vynne, N.D. Burgess, E. Wikramanayake, N. Hahn, et al. 2017. An ecoregion-based approach to protecting half the terrestrial realm. *BioScience* 67(6): 534–545.
- Domínguez, L. and C. Luoma. 2020. Decolonising conservation policy: how colonial land and conservation ideologies persist and perpetuate indigenous injustices at the expense of the environment. *Land* 9(3): 65.
- Dorresteijn, I., J. Hanspach, A. Kecskés, H. Latková, Z. Mezey, S. Sugár, H. von Wehrden, et al. 2014. Human-carnivore coexistence in a traditional rural landscape. *Landscape ecology* 29(7): 1145–1155.
- Duffy, R., F. Massé, E. Smidt, E. Marijnen, B. Büscher, J. Verweijen, M. Ramutsindela, et al. 2019. Why we must question the militarisation of conservation. *Biological Conservation* 232: 66–73.
- Dunlap, A. 2020. Review of Bram Büscher and Robert Fletcher. 2020. The conservation revolution: radical ideas for saving nature beyond the Anthropocene. New York: Verso. *Journal of Political Ecology* 27(1).
- Escobar, A. 2010. Latin America at a crossroads: alternative modernizations, post-liberalism, or post-development? *Cultural studies* 24(1): 1–65.
- Escobar, A. 2018. *Designs for the Pluriverse*. Durham, NC: Duke University Press.
- Fletcher, R. and B. Büscher. 2020. Conservation basic income: a non-market mechanism to support convivial conservation. *Biological Conservation* 244: 108520.
- Fraser, N. 2009. Scales of justice: reimagining political space in a globalizing world. Volume 31. New York, NY: Columbia University Press.
- Haller, T., A. Zangger, and S. Weissman. 2020. Convivial constitutionality: human-predator interrelations in complex social-ecological systems. Research proposal. Switzerland: Swiss National Science Foundation.
- Haraway, D.J. 2013. When species meet. Volume 3. Minneapolis, MN: Uinversity of Minnesota Press.
- Hazzah, L., S. Chandra, and S. Dolrenry. 2019. Leaping forward the need for innovation in wildlife conservation. In: *Human-wildlife interactions: turning conflict into coexistence* (eds. Beatrice, F., J.A. Glikman, and S. Marchini). Pp. 359–383. Cambridge: Cambridge University Press.
- He, J. and T. Sikor. 2015. Notions of justice in payments for ecosystem services: insights from China's Sloping Land Conversion Program in Yunnan Province. *Land Use Policy* 43: 207–216.
- Hoang, C., P. Satyal, and E. Corbera. 2019. 'This is my garden': justice claims and struggles over forests in Vietnam's REDD+. Climate Policy 19(sup1): S23–S35.
- Hsiao, E. and P. Le Billon. 2021. Connecting peaces: TBCAs and the

- integration of international, social, and ecological peace. *International Journal on World Peace* 38(1): 7–40.
- Hussain, S. 2019. The snow leopard and the goat: politics of conservation in the Western Himalayas. Seattle, WA: University of Washington Press.
- Icaza, R. and R. Vázquez. 2013. Social struggles as epistemic struggles. *Development and Change* 44(3): 683–704.
- ICCA Consortium. 2021. Territories of life: 2021 report. ICCA Consortium.
- IPBES. 2019. Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (eds. Settele, J., E.S. Brondizio, S. Díaz, and H. T. Ngo). Bonn: IPBES secretariat.
- Kashwan, P., R.V. Duffy, F. Massé, A.P. Asiyanbi, and E. Marijnen. 2021. From racialized neocolonial global conservation to an inclusive and regenerative conservation. *Environment: science and policy for sustainable development* 63(4): 4–19.
- Komi, S. 2021. Political and symbolic wolves/Poliittinen ja symbolinen susi. CONVIVA research blog. https://conviva-research.com/politicaland-symbolic-wolves-poliittinen-ja-symbolinen-susi/. Accessed on February 22, 2022
- König, H.J., C. Kiffner, S. Kramer-Schadt, C. Fürst, O. Keuling, and A.T. Ford. 2020. Human–wildlife coexistence in a changing world. *Conservation Biology* 34(4): 786–794.
- Kothari, A. 2014. Radical ecological democracy: a path forward for India and beyond. *Development* 57(1): 36-45.
- Kothari, A. 2021. Half-earth or whole-earth? Green or transformative recovery? Where are the voices from the Global South? *Oryx* 55(2): 161–162.
- Kothari, A., A. Salleh, A. Escobar, F. Demaria, and A. Acosta (eds.). 2019.
 Pluriverse: a post-development dictionary. New Delhi: Tulika Books and Authorsupfront.
- Krauss, J.E. 2021. Decolonizing, conviviality and convivial conservation: towards a convivial SDG 15, life on land? *Journal of Political Ecology* 28(1).
- Krauss, J.E. 2022. Unpacking SDG 15, its targets and indicators: tracing ideas of conservation. *Globalizations*: 1–16.
- Leal, A.P. 2007. Participation: the ascendancy of a buzzword in the neo-liberal era. *Development in Practice* 17(4–5): 539–548.
- Locke, H. 2014. Nature needs half: a necessary and hopeful new agenda for protected areas. *Nature New South Wales* 58(3): 7.
- Lorimer, J. 2015. Wildlife in the Anthropocene: conservation after nature. Minneapolis, MN: University of Minnesota Press.
- Mabele, M.B. 2020. In pursuit of multidimensional justice: lessons from a charcoal 'greening' project in Tanzania. *Environment and Planning E: Nature and Space* 3(4): 1030–1052.
- Marris, E. 2013. *Rambunctious garden: saving nature in a post-wild world.*London: Bloomsbury Publishing.
- Martin, A., M.T. Armijos, B. Coolsaet, N. Dawson, Gareth A.S. Edwards, R. Few, N. Gross-Camp, et al. 2020. Environmental justice and transformations to sustainability. *Environment: Science and Policy for Sustainable Development* 62(6): 19–30.
- Marvier, M. 2014. New conservation is true conservation. *Conservation Biology* 28(1): 1–3.
- Massarella, K., A. Nygren, R. Fletcher, B. Büscher, W.A. Kiwango, S. Komi, J.E. Krauss, et al. 2021. Transformation beyond conservation: how critical social science can contribute to a radical new agenda in biodiversity conservation. *Current Opinion in Environmental Sustainability* 49: 79–87.
- Mbaria, J. and M. Ogada. 2016. *The big conservation lie: the untold story of wildlife conservation in Kenya*. Auburn, WA: Lens and Pens Publishing LLC.
- Mignolo, W.D. 2011. *The darker side of Western modernity*. Durham, NC: Duke University Press.
- Murove, M.F. 2012. Ubuntu. Diogenes 59(3-4): 36-47.

- Mwamidi, D., A. Nunow, and S.H. Mwasi. 2012. The use of indigenous knowledge in minimizing human-wildlife conflict: the case of Taita Community, Kenya. *International Journal of Current Research* 4(02): 026–030.
- O'Brien, K., J. Reams, A. Caspari, A. Dugmore, M. Faghihimani, I. Fazey, H. Hackmann, D. Manuel-Navarrete, et al. 2013. You say you want a revolution? Transforming education and capacity building in response to global change. *Environmental Science & Policy* 28: 48–59.
- Pooley, S., S. Bhatia, and A. Vasava. 2020. Rethinking the study of human-wildlife coexistence. *Conservation Biology* 35(3): 784–793.
- Ramutsindela, M., and M. Shabangu. 2018. The promise and limit of environmental justice through land restitution in protected areas in South Africa. In: *Land Rights, Biodiversity Conservation and Justice*. Pp. 31–48. Place: London and New York, NY: Routledge.
- Schleicher, J., J.G. Zaehringer, C. Fastré, B. Vira, P. Visconti, and C. Sandbrook. 2019. Protecting half of the planet could directly affect over one billion people. *Nature Sustainability*: 1–3.
- Schlosberg, D.. 2004. Reconceiving environmental justice: global movements and political theories. *Environmental Politics* 13(3): 517–540.
- Shrivastava, P., M.S. Smith, K. O'Brien, and L. Zsolnai. 2020. Transforming sustainability science to generate positive social and environmental change globally. *One Earth* 2(4): 329-340.
- Svarstad, H. and T.A. Benjaminsen. 2020. Reading radical environmental justice through a political ecology lens. *Geoforum* 108: 1–11.
- Tamale, S. 2020. Decolonization and Afro-feminism. Quebec: Daraja Press.
- Tauli-Corpuz, V. 2010. Indigenous peoples' self-determined development: Challenges and trajectories. In: Towards an alternative development paradigm: Indigenous people's self-determined development (eds. Tauli-Corpuz, V., L. Enkiwe-Abayao, and R. de Chavez). Pp. 1–78. Philippines: Tebtebba Foundation.
- Temper, L. 2019. Blocking pipelines, unsettling environmental justice: from rights of nature to responsibility to territory. *Local Environment* 24(2): 94–112.

- Temper, L. and D.D. Bene. 2016. Transforming knowledge creation for environmental and epistemic justice. *Current Opinion in Environmental Sustainability* 20: 41–49.
- Temper, L., M. Walter, I. Rodriguez, A. Kothari, and E. Turhan. 2018. A perspective on radical transformations to sustainability: resistances, movements and alternatives. *Sustainability Science* 13(3): 747–764.
- Toncheva, S. and R. Fletcher. 2021. From conflict to conviviality?

 Transforming human-bear relations in Bulgaria. Frontiers in

 Conservation Science 2: 41.
- Waldron, A., V. Adams, J. Allan, A. Arnell, G. Asner, S. Atkinson, A. Baccini, et al. 2020. Protecting 30% of the planet for nature: costs, benefits and economic implications: working paper analysing the economic implications of the proposed 30% target for areal protection in the draft post-2020 Global Biodiversity Framework. Campaign for Nature: http://pure.iiasa.ac.at/id/eprint/16560/. Accessed on February 22, 2022.
- Widenhorn, S. 2013. Towards epistemic justice with indigenous peoples' knowledge? Exploring the potentials of the convention on biological diversity and the philosophy of Buen Vivir. *Development* 56 (3): 378–386.
- Wilson, E.O. 2016. *Half-earth: our planet's fight for life*. New York, NY: WW Norton and Company.
- Wyborn, C., J. Montana, N. Kalas, F. Davila Cisneros, S. Clement, S. Izquierdo Tort, N. Knowles, et al. 2020. Research and action agenda for sustaining diverse and just futures for life on Earth. Biodiversity Revisited. Cambridge: Luc Hoffmann Institute.
- Zanotti, L., C. Carothers, C.A. Apok, S. Huang, J. Coleman, and C. Ambrozek. 2020. Political ecology and decolonial research: co-production with the Iñupiat in Utqiagvik. *Journal of Political Ecology* 27(1): 43-66.
- Zurba, M., K.F. Beazley, E. English, and J. Buchmann-Duck. 2019. Indigenous protected and conserved areas (IPCAs), Aichi Target 11 and Canada's Pathway to Target 1: focusing conservation on reconciliation. *Land* 8(1): 10.