

NEGOTIATING CLIMATE CHANGE IN CRISIS

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14. On Climate and the Risk of Onto-Epistemological Chainsaw Massacres: A Study on Climate Change and Indigenous People in Namibia Revisited

Ute Dieckmann

On behalf of a Danish organisation (Charapa Consult), in 2012 the Legal Assistance Centre in Windhoek undertook a research study on climate change and indigenous people in Namibia. Charapa Consult had itself been commissioned by the World Bank Trust Fund for Environmentally and Socially Sustainable Development to undertake a regional research project in Africa, and parallel studies for Asia and Latin America had also been commissioned. As a researcher involved in the Namibia study, in this essay I critically assess its methodological challenges and dilemmas in relation to the global framework within which it was conducted. I place special emphasis on the predicament of *short-term* 'participatory' research with indigenous communities on climate change. I also outline the challenges arising from the necessity of squeezing indigenous environmental knowledge and experience into internationally acknowledged scientific frameworks, an approach which implies a subordination of indigenous peoples' ontologies to western ontologies. The compartmentalising necessitated by such a methodology risks

the loss of the most important aspects of indigenous ecological knowledge related to climate change.

Introduction

Who better to lead during this time of dramatic climate change than peoples who know or can recollect in their indigenous traditions of TK [Traditional Knowledge] and/or TEK [Traditional Ecological Knowledge] practices of sustainability and indigenous ingenuity—Indigenuity? Can you imagine a world where nature is understood as full of relatives not resources, where inalienable rights are balanced with inalienable responsibilities and where wealth itself is measured not by resource ownership and control, but by the number of good relationships we maintain in the complex and diverse life-systems of this blue green planet? I can (Wildcat 2013: 515).

In this essay, I draw on a number of methodological challenges encountered during a study on climate change and indigenous people in Namibia as a starting point for a critique of climate change studies that attempt to integrate indigenous knowledge into dominant scientific frameworks. I was involved in the study as an anthropologist employed by the implementing organisation as part of a multi-disciplinary team. I illustrate what happens when we try to compartmentalise indigenous knowledge in order to fit it into our own conceptual frameworks.

Complementing Sullivan's Chapter 3 (this volume), I outline what we would gain from taking indigenous onto-epistemologies seriously, in the context of climate change and beyond. In short, I argue that avoidance of onto-epistemological chainsaw massacres, and the opening up of more possibilities for radical (re-)learning so as to avert ecological crisis, requires putting normalised 'western' frameworks aside in order to stop, listen and think carefully. I am drawing here on theoretical physicist Karen Barad's (2003) call for a revised "onto-epistem-ology", and borrow the term "chainsaw massacres" from Dianne Rocheleau's (2005: 339) analysis of the risks in cartography on fixing indigenous onto-epistemologies into the "iron grid of Descartes" (ibid: 328).

The Study

In 2012, the World Bank Trust Fund for Environmentally and Socially Sustainable Development (TFESSD) commissioned a Danish organisation (Charapa Consult) concerned with human rights and development¹ to undertake a regional research project on indigenous peoples and climate change in Africa, having commissioned similar regional studies for Asia and Latin America. The research in Africa, coordinated by Charapa with a number of implementing partners, looked at three ecological sub-regions of the African region: the tropical forest zone (Republic of Congo); arid/desert areas in southern Africa (Namibia); and lakes and wetlands (Kenya) (Charapa Consult 2012: 7). The overall research initiative had three main objectives: to analyse how indigenous peoples were affected by climate change; to identify indigenous peoples' local and traditional knowledge, practices and adaptation strategies; and to support strengthening of indigenous peoples' capacities for their engagement and direct participation in the formulation of public policies regarding climate change.

In Namibia, the Legal Assistance Centre (LAC)² in Windhoek, having an excellent record of research regarding marginalised/indigenous communities, was contracted to undertake the research for this project. Two indigenous Namibian communities were selected as case studies: the Topnaar (†Aonin) and Hailom communities, both speaking Khoekhoegowab but living in different parts of the country (see Figure 18). These two communities were selected due to the difference of environmental circumstances in which they live, as well as the prior research experience of the lead author (for example, Dieckmann 2007, 2012). Both communities belong to the most marginalised people in Namibia (Odendaal and Werner 2020).

As requested by the organisations commissioning the study, the main components of the research were literature review, field research—including focus group discussions, household surveys, trend lines, ranking of livelihood strategies, mapping of well-being, knowledge

1 See <http://www.charapa.dk/>.

2 See <http://www.lac.org.na/>.

and political assets and semi-structured interviews—and data analysis (Charapa Consult 2012: 10).



Fig. 18. Locations of Topnaar and Hailom research communities in Namibia. Dieckmann et al. (2013), http://www.lac.org.na/projects/lead/Pdf/climate_change.pdf, p. 35, CC BY 4.0.

On Ethics and Frameworks

Undertaking ‘participatory’ research regarding climate change in communities that are severely marginalised and struggling for daily survival felt extremely inadequate to me, especially given the limitations on participation caused by having to follow a pre-determined framework and methodology. The Topnaar and Hailom communities today lack access to land and only have very limited access to natural resources. In post-colonial Namibia they experience high unemployment, low levels of education, very limited political representation and serious discrimination.

During the study people wanted to talk about their current situation and needs, rather than climate change and anticipated impacts. In addition, the limitations in access to land and natural resources meant that the direct impacts of climate change seemed to be minimal compared to other urgent threats to their livelihoods, at least in 2012.

These research observations and experiences led to fundamental questions being asked of the common conceptual framework being deployed so as to make the research consistent with the wider study: as shown schematically in Figure 19. This framework drew on the vulnerability concept developed by the Intergovernmental Panel on Climate Change (IPCC 2007), combined with the framework used for the World Bank study on Indigenous Peoples and Climate Change in Latin America and the Caribbean Region (Kronik and Verner 2010), itself adapted from the UK Department of International Development's (DFID) Sustainable Livelihood Framework as a tool to assess the vulnerability of different socio-economic groups and their adaptive capacity.

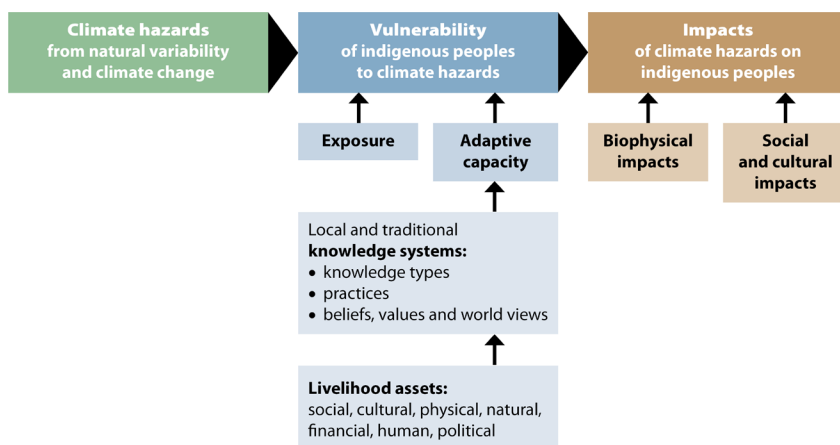


Fig. 19. Conceptual framework deployed in the World Bank Trust Fund for Environmentally and Socially Sustainable Development (TFESSD) study. Dieckmann et al. (2013), http://www.lac.org.na/projects/lead/Pdf/climate_change.pdf, p. 27, CC BY 4.0.

This conceptual framework analytically distinguishes between the impacts of climate change hazards and the conditions established by the contexts in which indigenous communities live. The framework

is based on specific scientific assumptions operating within a specific scientific logic, although even in a western ontology, separating climate change-related impacts from other factors such as governance, access to land, and socio-economic status—which are interrelated and have a cumulative impact on indigenous peoples—seems highly problematic (also see Barnes et al. 2013: 543). This conceptual separation runs the risk of *de-politicising* and *re-naturalising* climate change in turning the attention away from the unevenly distributed anthropogenic/industrial causes of climate hazards.

Furthermore, merely providing a slot for “local and traditional knowledge systems” implies—as Mario Blaser (2009: 15) points out for the context of conservation—that “Indigenous environmental knowledges and practices” are “translated into discrete packages of knowledge that can be integrated into the toolkit of conservation practitioners, often as mere informational inputs”. When applied in specific localities, the usefulness of the framework and its underlying assumption becomes highly questionable.

On Non-Existent and Non-Fitting Concepts

The issue of frameworks is closely connected to the question of concepts. Neither the Haillom nor the Topnaar had prior knowledge of the concept of climate change as such, an observation also reported for indigenous Baka and Babongo communities participating in the parallel Republic of Congo study (Charapa Consult 2012: 11). As Charapa (2012: 12, emphasis added) state in their final report: “[w]hen attempting to compare scientific and indigenous notions of climate change and related impact, *it becomes clear that these are not immediately comparable*”.

It is not only that these notions may not be immediately comparable nor translatable, however, but that at times they may simply be incompatible (as also documented for Khoekhoegowab-speaking communities in north-west Namibia by Sullivan (2002), and more recently for Andean circumstances in Bolivia by Burman (2017)). To complexify matters further, this situation is not limited to the rather abstract concept of climate change—a concept whose definition even scientific experts disagree on—but relates also to additional associated terms such as drought, weather and environment.

During our fieldwork, Haillom participants came up with three terms for drought. Eventually, the community involved with the study agreed that *!khurub* should be used. This term also means hunger or no food. It is not only related to a lack of rain or dry environment but also includes impacts on the community. Complexifying matters, a frost that kills bushfood can also cause *!khurub*, meaning that the term and concept is not limited to low rainfall alone. The difficulty of comparing the concept of *!khurub* with ‘drought’ is thus evident: while ‘drought’ in science relates to a climate phenomenon, ‘drought’ for Haillom relates more specifically to associated broad spectrum impacts resulting in a loss of foods for humans that may have multiple climatic causes. Such complexities are also apparent elsewhere: Turkana and Maasai participants in the overall study had similar concepts combining drought and hunger (Charapa Consult 2012: 53; also see Goldman et al. 2016).

The concept of ‘weather’ is another telling example. Thomas Widlok (2017: 4) points out that the translation of the English term ‘weather’ in the Khoekhoegowab spoken by Haillom constitutes a compound of agentive forces: *!nanutsillhaotsi#ǁab* literally translates as ‘rains-and-clouds-and-wind’, although this term is rarely used in everyday discourse. *!Nūkhoen* (Damara), who like Haillom and Topnaar (*!Aonin*) speak Khoekhoegowab, use the term *!oab tsî !nanub* (wind and rain) for weather (Schnegg 2019).

‘Environment’ is another instance where understandings do not fit. According to Widlok, translations such as *!namibeb* and *!ha!hais* were originally coined by official language committees, but are also hardly used, and he suggests that for Haillom, ‘environment’ mainly refers to man-made environmental features (e.g. houses/huts or fire places) (Widlok 2017: 5). This understanding also points to other relevant concepts, especially the western dichotomy of natural and human/cultural, which do not exist in the same form in many indigenous understandings, Haillom (Widlok 2009, 2017) and other Khoekhoegowab-speaking peoples (Sullivan and Hannis 2016) included. The distinction between natural and supernatural agencies also seems to be non-existent or at least blurred in these contexts (Schmidt 2014; Sullivan and Low 2014; Widlok 2017: 5–6; Dieckmann 2021a).

In sum, central terms used for key concepts in climate change discourse either do not exist in, or do not seamlessly translate into, indigenous languages.

On Relationships and Agency

Arguably, then, events and developments that scientists place in the context of climate change and relate in certain ways (mostly causally) to each other, may be perceived differently by indigenous peoples through their distinct experiences of being-in-the-world and accompanying explanations of causality (also see Charapa Consult 2012: 66–67). During the studies in Namibia and the other African countries, it was thus a challenge “to directly relate and compare the perceptions and experiences of the indigenous communities participating in this study with, for example, the climate change phenomenon and first order impacts identified through the literature review” (Charapa Consult 2012: 52). Similarly, it was often impossible to provide sufficient room for the interpretations most meaningful to the participating communities.

Khoekhoegowab-speaking communities experience and establish relationships, including their drivers and effects, that may be different to scientific models. Some match with scientific explanations (cf. Sullivan 1999), while others do not. Some indicative fragments are provided below.

Hailom regard the pied crow (*!kha-nub*) as a protected bird, because according to Hailom tales, it brings back the rain after it is taken away from them by the animal “married to the rain”, i.e. the elephant (Dieckmann 2012: 12–13), again indicating that there is no clear-cut distinction between the world of myth, legend, and the supernatural and the natural world.

Hailom, like other Khoe and San peoples, report the existence of ‘water snakes’ that protect waterholes, such that if the snake is killed or dies the water will dry up (Hoff 1997; Sullivan and Low 2014; Dieckmann 2021a).

‡Nūkhoen connect winds and rain, and moreover associate both with non-human agents, speaking of the power of winds, good and bad winds, and gendered winds (Low 2007; Schnegg 2019). The strongest

spirit-being (*llgamab*) for Haillom is the spirit of the rain (Dieckmann 2021a: 121).

Haillom look to the moon to see what will happen in the next season, as indicated schematically in Figure 20. When it is half-moon, there will be no rain in the season (1); when it is half-moon but one side is higher, the rain will start (2); and when the left side is even higher, it will be a sign of death and no rain (3).

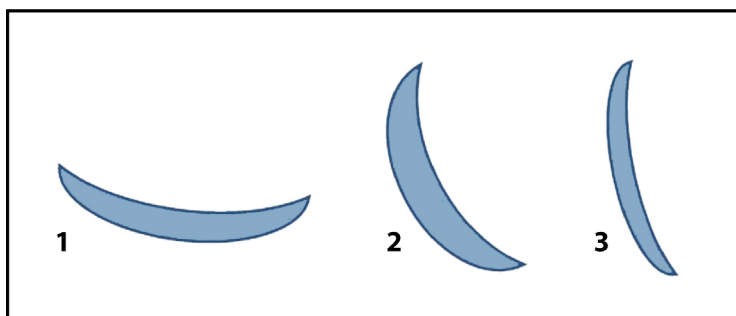


Fig. 20. Position of the moon in Haillom rain forecasts. Dieckmann et al. (2013), http://www.lac.org.na/projects/lead/Pdf/climate_change.pdf, p. 91, CC BY 4.0.

These are just a number of snippets connected to what scientists and most westerners would commonly call weather or climate, suggesting ‘deviations’ from scientific models based on western ontologies that assume dichotomies of nature vs. culture, human = animated vs. nature = unanimated and natural vs. supernatural. As brief and decontextualised examples, they nonetheless illustrate that rain and wind, celestial bodies, certain animals and more are regarded as agents. Khoekhoegowab-speaking communities, like other indigenous communities, seem to have an animistic understanding of the world (cf. Sullivan 2010; Low 2014) wherein the world is deemed “full of persons, only some of whom are human” (Harvey 2006: 11). As invoked above, the world is also inhabited by a variety of agential spirit-beings, connected—inter alia—to weather, animals and ancestors.

In these Namibian indigenous contexts, humans are an integral part of a wider ecology animated by other non-human agents, past and present. Relationships are thereby conceptualised in fundamentally different ways to the scientific framework of the Charapa study and most other

scientific studies on climate change. This situation also appears true for other indigenous peoples worldwide (Yeh 2016; Goldman et al. 2018).

Why Does This Matter?

The above examples are provided as potentially puzzling onto-epistemological snippets to serve as illustrations of the epistemic violence—or chainsaw massacre—that can happen when knowledge is removed from its context. While the authors (both of the Namibian and the other African studies) tried to make space to mention at least some of these nuanced understandings and relationships, they remained odds and ends in their final reports. Because they were not overtly connected to scientific notions, they were also subsumed under headings such as ‘beliefs’ or ‘culture’ (see e.g. Charapa Consult 2012: 57), further undermining their relevance to the main business of understanding climate change. While certain aspects of indigenous ‘ideas’ may be called *knowledge*, namely those that can be made to correspond with scientific understandings, others are framed as *beliefs* unworthy as contributions to science.

A number of interrelated arguments—political, ethical, methodological, theoretical, philosophical—suggest that the above challenges should be taken seriously in the context of climate change.

Disempowering Indigenous People

The study discussed above is just one of many international studies which “attempt to combine ‘expert assessment’ with processes of ‘stakeholder consultation’” (Scoones 2009: 548; also see Brosius 2006; contributions in Cameron, Leeuw and Desbiens 2014; Yeh 2016). Admittedly, the Charapa study (like many other studies) tried to do justice to indigenous peoples’ needs and rights, and the partners explicitly agreed on general principles for the research to this end (see Charapa Consult 2012: 9): but did we meet these needs?

In retrospect, I would reply with a rhetorical question: whose ontology counts?

The study followed the familiar road of one ontology and the belief that this ontology can come to be known by different epistemologies.

Blaser calls this a “multiculturalist” perspective on indigenous knowledge, “according to which cultural differences are ultimately negotiable because they are mutually commensurable via what is common to all: a world or reality ‘out there’” (Blaser 2009: 15; see also Goldman et al. 2016: 28).

This conceptualisation has been disputed in certain branches of academic thought (e.g. philosophy, post-colonial studies, feminism, science and technology studies, see e.g. Blaser 2013; Mol 2002). Relatedly, almost two decades ago, Karen Barad, a trained theoretical physicist, pointed to the Cartesian origin of the analytical separation of epistemology and ontology and stressed the analytical inseparability of the two:

[t]he separation of epistemology from ontology is a reverberation of a metaphysics that assumes an inherent difference between human and nonhuman, subject and object, mind and body, matter and discourse. *Onto-epistem-ology*—the study of practices of knowing in being—is probably a better way to think about the kind of understandings that are needed to come to terms with how specific intra-actions matter (Barad 2003: 829, emphasis in original).

Whilst there are now attempts in academic argumentation to overcome these separations, it is important to acknowledge that many indigenous philosophies did not distinguish between them. Indeed, the inseparability of the two is an essential feature of so-called relational ontologies (Sidorkin 2002: 91), in which relationships constitute beings or persons (including non-human beings) rather than vice-versa. This perspective stands in stark contrast to the atomistic or substantivist ontology dominant in the western world.

I thus argue that by conceptually separating *how-we-know* from *what-we-know*, studies like the one described in this essay further disempower indigenous people by squeezing their knowledge into scientific conceptual straightjackets or subsuming it in a side note as ‘beliefs’ or ‘culture’, despite the stated intention to do otherwise (also see Muller et al. 2019: 402).

Preventing (Radical) Learning

As long as ‘we’ try to shoehorn indigenous knowledge into our onto-epistemological frameworks, we will never reach the roots of the problem. Climate change is the outcome of practices entangled with a specific western philosophical heritage, by the dominant ‘western’ onto-epistemology. With this acknowledgement, it would be wise to look *beyond* this tradition for possible paths forward as ‘humanity’ has much more to offer. Although many thinkers have already stressed this possibility (e.g. Rose 2005; Sullivan 2013, 2017; Umkeek 2014; Castree 2016), there is still a tendency in much climate change research to ignore these calls. To my point of view, indigenous ontologies offer a variety of interrelated aspects in response to the current climate and ecological crisis, a few of which are encouraged below.

Take relational onto-epistemologies seriously. As soon as we acknowledge the inseparability of *how-we-know* and *what-we-know*, we can stop the bizarre fighting about one nature/several cultures or one culture/several natures. We can also stop fighting about many other things, e.g. ‘the truth’, as ‘truth’ evolves in the field of relations between different beings. We have different, partly overlapping, onto-epistemologies which we need to consider holistically or, in Escobar’s words, we have a “pluriverse” as “a world where many worlds fit” (Escobar 2011: 139).

‘Dethrone’ the human. Although many philosophers, posthumanist scholars and other academics have already pointed to the need to conceptually and practically re-integrate the human into ecology, many of them, based on Eurocentric scholarship, (still) tend to pay no or very little attention to indigenous knowledges, perspectives and ontologies (see also Bignall and Rigney 2019). Disclosing a western onto-epistemology as particular to a specific area and period and philosophising about new approaches to imagine the world are useful endeavours, but it might be less abstract and less theoretical to encourage more learning from concrete cases of existing or past alternatives of human-environment relationships as lived by particular groups of indigenous peoples.

Re-learn mutual respect and relatability by (re-)animating nature. Indigenous ways of being-in-the-world and onto-epistemologies epitomise what is needed in dealing with climate change (Wildcat 2013; Umek 2014). The necessity to maintain ethical and mutual relationships

to non-human others is a central part of their experience, an experience which appears lost in post-Enlightenment European thought. The objectification of nature is an important cause for the current ecological crisis and technology on its own will not bring salvation (see e.g. Umek 2014: 7). What is needed is a 'relational turn' (e.g. Dépelteau 2015), not only in science but in the western approach to life.

Focus on local knowledge and acknowledge people's connection to/knowledge of the land. The points above refer to general principles connected to indigenous onto-epistemologies. The concept of onto-epistemology also stresses the importance of place, i.e. of locality with regard to knowledge evolution, and thus of the situatedness of knowledge. While the relational ontologies of indigenous peoples located in continents beyond Africa have been studied and compared extensively, case studies focusing on onto-epistemological issues of indigenous peoples in Africa have rarely been considered in comparative discussions within the field of 'new animism' (although see Sullivan 2010; Low 2014; Dieckmann 2021b: 25–26) or indeed linked to the ecological crisis (with few exceptions, e.g. Goldman et al. 2016; Sullivan 2017; Schnegg 2021). Khoekhoegowab-speaking communities in southern Africa, being severely affected by climate change, deserve special attention in this regard. These communities have lived for millennia with a harsh environment but due to their degree of marginalisation, their voices have hardly found their ways into official discourses. Muller et al. (2019: 405–07) provide a number of promising examples from other continents, where indigenous peoples' onto-epistemologies have been integrated into environmental management and legal provisions.

What if Topnaar or Hailom experiences of the world and their acknowledgement of the importance of mutual relationships between a variety of human and non-human actors (including winds, rain, animals and plants) could find their ways into the Namibian (and global) climate change discourse? What if these communities could be integrated into the management of the national parks established on parts of their ancestral lands? What if these national parks became legal persons? Would 'other' people around the world change their/our behaviour if they/we took these ways of engaging with their surroundings as our example? How might this unfold?

References

- Barad, Karen, 'Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter', *Journal of Women in Culture and Society*, 28(3) (2003), 801–31.
- Barnes, Jessica, M. Dove, M. Lahsen, A. Mathews, P. McElwee, R. McIntosh, et al., 'Contribution of anthropology to the study of climate change', *Nature Climate Change*, 3(6) (2013), 541–44, <https://doi.org/10.1038/nclimate1775>.
- Bignall, Simone, and Daryle Rigney, 'Indigeneity, posthumanism and Nomad Thought Transforming Colonial Ecologies', in *Posthuman Ecologies—Complexity and Process After Deleuze*, ed. by Rosi Braidotti and Simone Bignall (London: Rowman & Littlefield International Ltd, 2019), pp. 159–81.
- Blaser, Mario, 'The Threat of the Yrmo: The Political Ontology of a Sustainable Hunting Program', *American Anthropologist*, 111(1) (2009), 10–20.
- Blaser, Mario, 'Ontological Conflicts and the Stories of Peoples in Spite of Europe: Toward a Conversation on Political Ontology', *Current Anthropology*, 54 (2013), 547–68.
- Brosius, J. Peter, 'What Counts as Local Knowledge in Global Environmental Assessments and Conventions?', in *Bridging Scales and Knowledge Systems: Concepts and Applications in Ecosystem Assessment A Contribution to the Millennium Ecosystem Assessment*, ed. by Walter V. Reid, Fikret Berkes, and Thomas J. Wilbanks (Washington: Island Press, 2006), pp. 129–44.
- Burman, Anders, 'The Political Ontology of Climate Change: Moral Meteorology, Climate Justice, and the Coloniality of Reality in the Bolivian Andes', *Journal of Political Ecology*, 14 (2017), 921–38, <https://doi.org/10.2458/v24i1.20974>.
- Cameron, Emilie, Sarah de Leeuw, and Caroline Desbiens, 'Indigeneity and ontology', *cultural geographies*, 21(1) (2014), 19–26, <https://doi.org/10.1177/1474474013500229>.
- Castree, Noel, 'Broaden research on the human dimensions of climate change', *Nature Climate Change*, 6(8) (2016), 731, <https://doi.org/10.1038/nclimate3078>.
- Charapa Consult, '*Indigenous Peoples and Climate Change in Africa: Traditional Knowledge and Adaptation Strategies: Draft Report*' (Rainforest Foundation UK, Legal Assistance Centre, Namibia and Mainyuito Pastoralist Integrated Organization, 2012), <http://www.charapa.dk/wp-content/uploads/Africa-IPs-CC-adaption.pdf>.
- Dépelteau, François, 'What Is the Direction of the "Relational Turn"?', in *Conceptualizing Relational Sociology: Ontological and Theoretical Issues*, ed. by Christopher Powell and François Dépelteau (Basingstoke: Palgrave Macmillan, 2015), pp. 163–85.

- Dieckmann, Ute, *Hai||om in the Etosha Region: A History of Colonial Settlement, Ethnicity and Nature Conservation*. (Basel: Basler Afrika Bibliographien, 2007).
- Dieckmann, Ute, *Born in Etosha: Living and Learning in the Wild* (Windhoek: Legal Assistance Centre, 2012).
- Dieckmann, Ute, 'Hai||om in Etosha: Cultural maps and being-in-relations', in *Mapping the Unmappable? Cartographic Explorations with Indigenous Peoples in Africa*, ed. by Ute Dieckmann (Bielefeld: Transcript, 2021a), pp. 93–137, <https://doi.org/10.14361/9783839452417>.
- Dieckmann, Ute, 'Introduction: Cartographic exploration with indigenous peoples in Africa', in *Mapping the Unmappable? Cartographic Explorations with Indigenous Peoples in Africa*, ed. by Ute Dieckmann (Bielefeld: Transcript, 2021b), pp. 9–46, <https://doi.org/10.14361/9783839452417>.
- Dieckmann, Ute, Willem Odendaal, Jacquie Tarr, and Arja Schreij, *Indigenous Peoples and Climate Change in Africa: Report on Case Studies of Namibia's Topnaar and Hai||om communities* (Windhoek: Legal Assistance Centre, 2013), http://www.lac.org.na/projects/lead/Pdf/climate_change.pdf.
- Escobar, Arturo, 'Sustainability: Design for the Pluriverse', *Development*, 54(2) (2011), 137–40, <https://doi.org/10.1057/dev.2011.28>.
- Goldman, Mara J., Meaghan Daly, and Eric J. Lovell, 'Exploring Multiple Ontologies of Drought in Agro-pastoral Regions of Northern Tanzania: A Topological Approach', *Area*, 48(1) (2016), 27–33, <https://doi.org/10.1111/area.12212>.
- Goldman, Mara J., Matthew D. Turner, and Meaghan Daly, 'A Critical Political Ecology of Human Dimensions of Climate Change: Epistemology, Ontology, and Ethics', *WIREs Climate Change*, 9(4) (2018), e526, <https://doi.org/10.1002/wcc.526>.
- Harvey, Graham, *Animism: Respecting the Living World* (New York: Columbia University Press, 2006), https://doi.org/10.1111/j.1748-0922.2008.00315_1.x.
- Hoff, Ansie, 'The Water Snake of the Khoekhoen and |Xam', *South African Archaeological Bulletin*, 52(165) (1997), 21–37, <https://doi.org/10.2307/3888973>.
- IPCC, *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, ed. by M. L. Parry, O. F. Canziani, J. P. Palutikof, P. J. van der Linden, and C. E. Hanson (Cambridge: Cambridge University Press, 2007).
- Kronik, Jakob, and Dorte Verner, *Indigenous Peoples and Climate Change in Latin America and the Caribbean* (Washington, DC: The World Bank, 2010), <https://doi.org/10.1596/978-0-8213-8237-0>.

- Low, Chris, 'Khoisan Wind: Hunting and Healing', *Journal of the Royal Anthropological Institute*, 13 (2007), 71–90, <https://doi.org/10.1111/j.1467-9655.2007.00402.x>.
- Low, Chris, 'Khoisan Ethnography, "New Animism" and the Interpretation of Southern African Rock Art', *South African Archaeological Bulletin*, 69(200) (2014), 164–72, <https://doi.org/10.1111/j.1467-9655.2007.00402.x>.
- Mol, Annemarie, *The Body Multiple: Ontology in Medical Practice* (Durham NC: Duke University Press, 2002).
- Muller, Samantha, Steve Hemming, and Daryle Rigney, 'Indigenous Sovereignities: Relational Ontologies and Environmental Management', *Geographical Research*, 57(4) (2019), 399–410, <https://doi.org/10.1111/1745-5871.12362>.
- Odendaal, Willem, and Wolfgang Werner (eds), *'Neither Here nor There': Indigeneity, Marginalisation and Land Rights in Post-independence Namibia* (Windhoek: Legal Assistance Centre, 2020).
- Rocheleau, Dianne, 'Maps as power tools: locating communities in space or situating people and ecologies in place?', in *Communities and Conservation: Histories and Politics of Community-based Natural Resource Management*, ed. by J. Peter Brosius, Anna Tsing, and Charles Zerner (Walnut Creek, CA; Oxford: AltaMira Press, 2005), pp. 327–62.
- Rose, Deborah Bird, 'An Indigenous Philosophical Ecology: Situating the Human', *The Australian Journal of Anthropology*, 16(3) (2005), 294–305, <https://doi.org/10.1111/j.1835-9310.2005.tb00312.x>.
- Schmidt, Sigrid, 'Spirits: Some Thoughts on Ancient Damara Folk Belief', *Journal of the Namibian Scientific Society*, 62 (2014), 133–60.
- Schnegg, Michael, 'The Life of Winds: Knowing the Namibian Weather from Someplace and from Noplace', *American Anthropologist*, 121(4) (2019), 830–44, <https://doi.org/10.1111/aman.13274>.
- Schnegg, Michael, 'Ontologies of climate change', *American ethnologist*, 48(2) (2021), <https://doi.org/10.1111/amet.13028>.
- Scoones, Ian, 'The politics of global assessments: the case of the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD)', *The Journal of Peasant Studies*, 36(3) (2009), 547–71, <https://doi.org/10.1080/03066150903155008>.
- Sidorkin, Alexander M., 'Chapter 7. Ontology, Anthropology, and Epistemology of Relation', *Counterpoints*, 173 (2002), 91–102.
- Sullivan, Sian, 'Folk and Formal, Local and National: Damara Cultural Knowledge and Community-based Conservation in Southern Kunene, Namibia', *Cimbebasia*, 15 (1999), 1–28.
- Sullivan, Sian, "'How Can the Rain Fall in This Chaos?": Myth and Metaphor in Representations of the North-West Namibian Landscape', in *Challenges for Anthropology in the 'African Renaissance': A Southern African Contribution*,

- ed. by D. LeBeau and R. J. Gordon (Roma, Lesotho: Institute of Southern African Studies, National University of Lesotho, 2002), pp. 255–65.
- Sullivan, Sian, 'Ecosystem service commodities'—a new imperial ecology? Implications for animist immanent ecologies, with Deleuze and Guattari', *New Formations: A Journal of Culture/Theory/Politics*, 69 (2010), 111–28.
- Sullivan, Sian, 'Nature on the Move III: (Re)countenancing an Animate Nature', *New Proposals: Journal of Marxism and Interdisciplinary Enquiry*, 6(1–2) (2013), 50–71, <https://ojs.library.ubc.ca/index.php/newproposals/article/view/183771>.
- Sullivan, Sian, 'What's ontology got to do with it? On nature and knowledge in a political ecology of the 'green economy'', *Journal of Political Ecology*, 24(1) (2017), 217–42, <https://doi.org/10.2458/v24i1.20802>.
- Sullivan, Sian, and Mike Hannis, 'Relationality, Reciprocity and Flourishing in an African Landscape: Perspectives on Agency amongst !Khaos-a Dama, !Narenin and !Ukun elders in west Namibia', *Future Pasts Working Papers*, 2 (2016), <https://www.futurepasts.net/fpwp2-sullivan-hannis-2016>.
- Sullivan, Sian, and Chris Low, 'Shades of the Rainbow Serpent? A KhoeSan Animal between Myth and Landscape in Southern Africa—Ethnographic Contextualisations of Rock Art Representations', *Arts*, 3(2) (2014), 215–44, <https://doi.org/10.3390/arts3020215>.
- Umeeek, Richard A. E., *Principles of Tsawalk: An Indigenous Approach to Global Crisis* (Vancouver: UBC Press, 2014).
- Widlok, Thomas, 'Where Settlements and the Landscape Merge', in *African Landscapes: Interdisciplinary Approaches*, ed. by Michael Bollig and Olaf Bubenzer (New York: Springer, 2009), pp. 407–27.
- Widlok, Thomas, 'No Easy Talk about the Weather: Eliciting "Cultural Models of Nature" among Hai||om', *World Cultures ejournal*, 22(2) (2017), <https://escholarship.org/uc/item/69n0s73f>.
- Wildcat, Daniel R., 'Introduction: Climate Change and Indigenous Peoples of the USA', *Climatic Change*, 120(3) (2013), 509–15, <https://doi.org/10.1007/s10584-013-0849-6>.
- Yeh, Emily T., 'How Can Experience of Local Residents be "Knowledge"? Challenges in Interdisciplinary Climate Change Research', *Area*, 48(1) (2016), 34–40, <https://doi.org/10.1111/area.12189>.

