Chapter 15 Conclusion—A Just World for Life?



Haydn Washington and Helen Kopnina

This book arose out of a desire to consider how society is travelling in terms of retaining the rich diversity of life on this spectacular planet. Once green and teeming, it is now a planet in peril, with the living world in decline (e.g. Wijkman and Rockstrom 2012; Ceballos et al. 2015). In this book we also consider where 'justice' lies in all this. After all, we all want justice, but what exactly do we want it *for*? We are sure all chapter authors believe in justice for society, and that involves questions of equity and equality (e.g. Wilkinson and Pickett 2010). We argue society should seek to cultivate an environmentally-focused perspective that embraces not only social and economic justice but also concern for non-human species. Through this we can find a middle road of cooperation that acknowledges the rights of human and nonhuman species alike (Shoreman-Ouimet and Kopnina 2015).

The underlying ethics behind this book is that we cannot just stop at social justice, that ethics, rights and justice cannot just belong *only* to our own species. Consider the eyes of a child, what one may call 'wild eyes' (O'Hanlon 2012), remember the sheer beauty and wonder that as children we saw, heard and felt when we stepped forward into that teeming green 'more-than-human' world, of which we were a part (Abram 2010). How could justice cease at the boundaries of one species? How could our childhood pets, the glorious birds that forage in our gardens, the majestic trees down the road, the secret places we found in childhood rambles—how could they not deserve justice also? Surely they too have a right to be, to evolve, to continue, to manifest the 'will to live' (Schopenhauer 1983) that animates the living world?

'Integrating social and ecological justice' means we need *both*, we should have both, and they should be integrated. That means they must be entwined. Many of the authors of this book have been champions for wild nature, working to create

H. Washington

PANGEA Research Centre, BEES, UNSW, Kensington, Australia e-mail: h.washington@unsw.edu.au

H. Kopnina (⊠)

The Hague University of Applied Sciences, The Hague, The Netherlands e-mail: alenka1973@yahoo.com; h.kopnina@hhs.nl

and defend national parks and other conservation initiatives. Quite simply, this was because they loved life, and even felt a deep spiritual connection to it, feeling 'kin' to all those with no human voice, often speaking out on their behalf. We point out that what poet Jeffers (1924) called 'falling in love outward' is to identify with and value life *outside* our species. However, this in no way means one cannot love inside our species. We have never met conservationists who did not also believe in social justice, along with ecojustice. Love after all is not a fixed entity, as it can expand outwards to take in all those pets, birds, trees and secret places of our childhood. Indeed, it can extend to gigantic wilderness, and to the planet itself. The eyes of a child see that clearly—they love it all, and as Edith Cobb (in Trimble 1994: 28) noted, they are: "in love with the universe". Thus, most children seem to know what many of us adults need to rediscover, that justice should apply to all. So the arguments in this book for ecojustice are pointing out that the scales of justice are currently out of balance, as 'justice' today only applies to humans. Of course justice does apply to humans, and we certainly support justice for all human groups, but why should it stop there? It should extend out also to the rest of life, and to the land itself. It is not a case of either/or in regard to justice. Indeed the whole point of this book has been to argue: "It has to be both".

To return to conservation itself, this book shows there are indeed good grounds to ask: 'Has conservation lost its way?'. Several chapter authors in this volume (e.g. Kaitlyn Creasy, Dominick DellaSala, Eileen Crist, David Johns, Haydn Washington) argue that some of it has, that sections of the conservation movement have been subverted and taken over by an anthropocentric and neoliberal worldview. For a long time, conservationists have argued that nature should be protected for itself. Now, some scholars, governments (and even supposedly 'conservation' bodies) are arguing that nature should be protected only for humanity. This view is singularly lacking in any care or generosity towards the rest of life we share this planet with. Many indigenous societies operate from a kinship ethics, where nonhumans are seen as our relatives (e.g. Knudtson and Suzuki 1992). Such lore and kinship ethics has a lot to teach Western society, which seems embarked on an unsustainable endless growth trajectory (Rees 2008). The view that "conservation has to be only for people" is thus we feel ethically bankrupt. Also, we believe such an approach is doomed if we really do want to retain the wealth of life on Earth that we have today (but maybe not by century's end if conservation fails). Several chapters (e.g. DellaSala, Johns, Washington) argue that conservation is one of the great issues of our time—which requires the rediscovering of an ecologically sustainable worldview and ethics of conservation. That worldview will have to extend justice to the nonhuman world, speaking for those who have no human voice. Indeed, as Joe Gray and Patrick Curry argue, society should extend a role to nature in terms of society's governance in the form of 'ecodemocracy'.

So how do we integrate social and ecological justice? The simple truth is that while it may be ethically easy to say they 'must' be integrated, practically it is *hard*. We always understood this was going to be the case, and this book was a venue to consider this in more detail. Part I considers various 'perspectives' involved in this issue. Chief among these is the issue of trying to shift an anthropocentric worldview that has been

dominant for centuries. The idea that science is fully 'objective', when it operates from an underlying (but almost never acknowledged) anthropocentric and neoliberal bias, is clearly mistaken (see Chap. 4). The idea that all of life on Earth (apart from us) is somehow 'just a resource' reflects just how deeply anthropocentrism is entrenched in society. Indeed we believe Crist (2012: 145) described the term 'resource' accurately as being a: "gaping wound on the face of language", one which has led to a distorted (and destructive) view of the world.

Perhaps no idea in ecology illustrates the need to think about ecological ethics so well as that of 'ecosystem services' (discussed here by Washington, while 'natural capital' is also discussed by Creasy). It is everywhere in science, and figures strongly in any discussion of conservation. Yet the ethical underpinnings of ecosystem services are anthropocentric, they are services *just for people* that nature provides. As argued by Washington in Chap. 6, it is time we considered not 'Nature's Contributions to People' but 'Peoples Contributions to Nature'. Chief amongst such contributions are respect for nature and a 'duty of care' towards her. Conservation should lead the way towards such discussion, rather than treating it as a taboo to be ignored. Johns in his chapter summarises this beautifully:

Our stomachs are full but we are hollow in our souls. In separating ourselves from the world by trying to control it we have created a hunger that things can never fill, though we keep trying. We have wounded our souls and our capacity for empathy and love. "This is what is the matter with us," Lawrence wrote (1968: 504). "We are bleeding at the roots, because we are cut off from the earth and sun and stars, and love is a grinning mockery, because, poor blossom, we plucked it from its stem on the tree of life, and expected it to keep on blooming in our civilized vase on the table." This is the great sacrifice we have made and it need not be.

DellaSala discusses a key problem within conservation, which is that anthropocentric and neoliberal ideologies have become ingrained in many big conservation organisations over the last few decades. He argues that:

For the largest conservation groups, improving public image and accountability may mean reforming board development to be more aligned with biodiversity/ecocentric mission statements, instead of chasing deep-pocket donors that, in turn, result in mission drift or 'greenwashing' conservation. More biodiversity scientists, ecojustice advocates, and nature philosophers on governing boards would help balance the increasing presence of pro 'business interests.'

He argues that it is time for conservationists to "take back the ecocentric center" from which we came. He believes we should borrow from the #MeToo movement—as it is now time for a #NatureToo movement to "rise up from the ashes as the Phoenix that will regenerate humanity by living in justice with Nature, and not at its expense".

So how do we integrate social and ecological domains? Veronica Strang considers this in terms of Earth jurisprudence and the 'rights of the river', discussing the case of the Whanganui river in New Zealand. This river was granted legal status and rights similar to a corporate person or trust. Two individuals were appointed to speak for the river, a representative of the Crown, and a representative of the Maori tribe. Strang concludes that to change the ways we engage with and make use of rivers is a large task, but thinking about them as living entities, and promoting their legal

rights as persons, is a good place to start. Indeed, she believes there is a growing recognition that a new intellectual paradigm—"a repositioning of humankind in relation to nonhuman kinds" is needed if society is to reach sustainability.

Gray and Curry in their chapter develop this idea further through arguing that nature should be allocated proxies in social governance structures. This is also articulated in a new platform 'GENIE' supporting ecodemocracy (www.ecodemocracy. net). Imagine if nature had two representatives on every National Park Board of Management. Currently, various human interest groups (recreation, environmental NGOs, local government, science) have representatives, but nature itself has none. Imagine if local and other governments had proxies representing nonhuman nature, speaking out for those with no human voice. This would be one good way of integrating social and ecological domains, literally giving nature a voice.

Similarly, Traditional Environmental Knowledge (TEK) offers a chance to rediscover what many indigenous cultures believed, that the two domains (nature and human) should be integrated—as nature is our kin. Strang and Thomasberger discuss this further in their chapters. Strang speaks of the Maori view, where people consider themselves to be at one with, and having equal status to, the mountains, the rivers and the seas. Hence she believes it encapsulates the core principles of ecological justice. Alessio Thomasberger argues that the biggest quest for conservation today is for humans to re-establish reciprocal relations to non-human beings. Hence he believes grass-root movements can strengthen and rejuvenate TEK to assist in the integration of social and ecological justice. Hence, building on indigenous lore and TEK can assist in many countries to move conservation back towards the ecocentric, towards a 'kinship ethics' with the rest of life.

Another way to integrate our social and ecological ideas is through our education system, as Helen Kopnina discusses. Conscious examination of one's own worldviews and ethics in regards to justice and conservation provides students a chance to think about a topic that may have been off their radar. The assignment she discusses was intended for the researcher to learn from student's perspectives and understanding of trade-offs and congruities between social and ecological justice. The exploration of the students' worldview revealed larger patterns in environmental awareness. Examination of assignments suggested ways in which a more ecocentric curriculum might be developed. Also, students' views on social and ecological justice suggested that support for ecological sustainability and the ethical treatment of nonhuman nature needs clear articulation of an ecocentric position, one that exposes its ethical underpinnings.

Cleary, Part II and III overlap, as ideas that expand the debate are also conservation solutions. Hence two key solutions have already been referred to, learning from indigenous worldviews and 'representation for nature' in governance (ecodemocracy). Another solution is to 'rewild' our world and to protect half of it for nature, so as to stop the mass extinction currently underway. Reed Noss in his chapter shows how we can do this, that it is in fact possible. Noss explains how the term 'rewilding' has become confused over time, moving from the idea of 'wilderness restoration' to 'Pleistocene rewilding' (introducing megafauna to replace those that have gone extinct) to reintroducing carnivores (or other native species) now extinct in an area.

This illustrates the problem of multiple meanings for a term, which help to confuse the original aim (in this case to restore land to wilderness condition). Noss explains the significant history of the vision that half of terrestrial lands need to be protected to keep the world's rich biodiversity. This has more recently been called 'Half Earth' (Wilson 2016) or 'Nature Needs Half' (Locke 2013; Kopnina 2016; Dinerstein et al. 2017). Most of the chapter authors here support such a vision. It is also thankfully a vision that is gaining increasing traction within a number of areas in academia.

Of course, there are 'elephants in the room' in regard to conservation that many in academia simply refuse to see. We consider three here. The first is *population*. As Richard Grossman notes in his chapter, conservation is so difficult because there are simply too many people on Earth, placing too great an impact on the natural world. As Grossman notes, we are on track to expand to 9 or perhaps 11 billion people, putting even more pressure on Earth's wondrous diversity of life, now very much under threat (Crist et al. 2017). Grossman explains how the I = PAT formula demonstrates that both the number of people and the affluence (or consumption) of each person must both be considered. In relation to this, Noss believes that shrinking the human population and economy is ultimately the only way we can achieve justice for all species. However, we face a strong denial of the problem of overpopulation in both society and academia. The chance of successfully integrating social and ecological justice is small in a future world where society continues to ignore this huge (and growing) elephant in the room. Not controlling human population (ethically and non-coercively) would be a disaster for *both* types of justice.

The second elephant in the room is *climate change*, referred to by several authors. Crist believes that climate change will exceed the impacts currently caused by agriculture and mass killings, and "grab the baton of mass extinction". Strang observes that the deepening anxieties about climate change and ecosystem destruction have sharpened debates about how to avert catastrophic levels of extinction and environmental degradation. Johns reminds us of the impact of climate change in terms of nature conservation, pointing out that all wild lands and oceans are affected by this. Grossman looks to the future, where increasing human population will of necessity increase greenhouse gas emissions. DellaSala reminds us of what should always be present in our minds as the desired outcome—"a living planet full of prospering, biodiverse life and a safe climate". Given the recent IPCC (2018) report, it is clear that effective nature conservation cannot occur if the climate crisis warms the planet beyond 2 degrees. Climate change is thus a key problem for ecojustice, as while many humans may be able to adapt, many other species and ecosystems cannot. If we cannot stop climate change then the future of conservation will become increasingly grim.

There is a final elephant in the room we feel should be mentioned—the idea of *endless growth* on a finite planet. The problem of the endless growth economy is referred to by several authors. Strang argues that society needs to abandon "short-termist capitalist ideologies" and over-dependence on growth-based economic systems. Crist observes that global trade—the main engine of the global economy is driving the: "triple whammy of extinctions, infrastructural sprawl, and greenhouse gas emissions". Washington concludes that the growth economy espoused by neoclassical

economics is fundamentally unsustainable, and is the key cause of ecocide. He suggests one solution is to re-engineer our consumer culture and move to a steady state economy. Creasy categorises the endless growth economy as "profoundly anthropocentric", where it ignores the reality of how "economically flourishing societies" have continued to degrade nature. Johns states that the call to make wilderness and comprehensive biodiversity protection 'subservient to growth' is: "the language of conquest and colonization using different words". DellaSala believes that to protect the Tongass rainforest in Alaska means getting the region moving toward an ecologically sustainable economy. Clearly, the authors here realise that endless growth on a finite planet is not working for conservation. Judging by past results, its continuation would likely lead to an escalating ecological holocaust.

In her chapter, Crist speaks eloquently of the need for us to let the Earth 'rebound', to be free, to be renewed and healed. She also speaks with passion about our society's curious idea that we 'own' the land, as if it was exclusively ours to possess and control. Indeed, she says this is the blueprint that has 'gridded' the world into little parcels supposedly *owned* by humans (no matter what else lives there). Crist argues that conservationists too have fallen into this mistake of thinking humanity 'owns' the world, and that the new imperative for conservation is to break free from this idea. Arguably, until it is commonly accepted that the world and the rest of life are not 'ours' to own, it will be hard to unify social and ecological justice. Crist speaks about conservation and 'freedom':

... the bold pursuit of large-scale conservation is about something new under the Sun. It is about setting Earth free to be an expansive, untamed, and exuberant mandala of life that can *actually*, if implemented in timely fashion, heal many ecological wounds ... authentic human freedom can never be founded on annihilating, constricting, and enslaving nonhumans nor can it blossom in the bleak landscape of Earth bondage and ruins. ... The prerequisite for realizing authentic human freedom is to free humans from the debasing shackles of human supremacy, lifting humanity into the infinite sight of the fundamental goodness of all life freed.

Crist notes what others allude to, that as part of the solution we must become willing to *give back* generously to the planet. We would observe that chief among the 'Contributions to Nature' we can make ethically is offering respect to the nonhuman world, and also upholding a human responsibility, a 'duty of care' towards life. In fact we would argue that ecocentric conservation is really putting that 'duty of care' into operation. That duty of care could help to integrate social and ecological justice. It will not be easy—but we believe it *is* possible.

Many of us (especially in conservation) worry about the future and what it will bring. Grossman notes that long-term conservation of nonhuman nature is unlikely without stabilization and reduction of human population. Johns reminds us that the 'growth monster' remains not just unchecked, but in fact is embraced in theory and practice by virtually all human societies. Gray and Patrick state that as we witness the sixth mass extinction unfold, it is hard not to feel exasperated by the lack of a say in human democracy for all the suffering species and ecosystems. Strang argues that efforts to rethink relations with non-human beings must be accompanied by real striving to reduce the pressure of human needs and interests. Washington argues

that the future of life on Earth is at a critical stage, as is whether society will itself reach a sustainable future. Creasy notes that the more widespread anthropocentrism becomes, the more society risks the extinction of the idea that nature and non-human life forms have "goods all their own". Crist believes that conservation critics have zero insight into the unthinkable ethical burden we bequeath humanity (through causing mass extinction). She concludes it is: "imperative to put a stop to this Earth catastrophe *now*".

Such worries and fears are of course valid, and anyone who reads widely on environmental issues is likely to share many of these. However, such concerns should not paralyse us from taking action. Rather, they should motivate us all to find solutions to the current environmental crisis. As Crist concludes, we now need: "devotion to our home planet, commitment to the possibility of a future ecological and equitable global civilization ...". A key solution is to *create the political will*. While academics tend to shy away from advocating political lobbying, we feel it is essential for effective conservation of nonhuman nature. One obvious example is we need to lobby all governments to support the 'Half Earth' conservation vision. Others include the need to campaign politically for ecodemocracy, and to argue that social and ecological justice should be entwined.

We do not believe society will find an ecologically and socially sustainable future unless social justice and ecojustice go hand in hand. However, unless it is acknowledged that nature requires ecojustice as much as people require social justice, there will never be a dialogue established to consider how to implement both together. An example of this is the situation where it is implied we simply have to log forests unsustainably for social justice reasons. One example is the increasing deforestation in Ghana that Thomasberger describes, where poor farmers are caught in a debt trap, felling forests to make charcoal so as to earn money to buy seed for crops, etc. However, without any counter-balancing ecojustice, this is leading towards total deforestation (where both humans and nature lose). Another example is where DellaSala describes how the Tongass rainforest in Alaska may now be scheduled for unsustainable clearcutting. However, unsustainable logging leads to the eventual loss of such forests, along with all the social benefits they brought society (and ecological benefits they brought the rest of life). Unsustainable logging is thus eventually a lose/lose situation for both nature and society.

While seeking to integrate social and ecological justice, we should accept there are complex issues involved, and complex ethical choices. To allow the integration of both justices to happen, society will need to overturn two deeply embedded *assumptions*, the 'Sole Value' assumption, and the 'Greater Value' assumption (Curry 2011). The first is essentially anthropocentrism, arguing that only humans have value. The second is much harder, as the 'Greater Value' assumption accepts that nature has some value, it is just that humanity *always* has greater value. This assumption becomes more and more problematic as the world becomes more crowded and overpopulated. On a full planet, conservation of nature comes into greater conflict with desires to grow more food and develop more land.

Given that the 'scales of justice' are clearly out of balance, one could argue for an 'Equal Value' assumption, where *both* nature and humanity have equal value. That

would imply that sometimes human desires for development will have to come second so as to protect nonhuman nature. An 'Equal Value' assumption would be moving in the right direction. However, we believe this too is inadequate. Even if one speaks of 'equal value' the default position (given the insidious nature of anthropocentrism) will be to favour humanity. It is worth remembering that ecocentrism foregrounds the more-than-human, but also acknowledges humans are part of nature. A prime focus on nature thus also includes human well-being as part of (but not master) of the ecosystem.

However, given that centuries of anthropocentrism have massively degraded nature, we argue that now nature must have primary value, since we all (humans included) depend on it. This would at last properly correct the scales of justice. Given the scope of the environmental crisis and the accelerating mass extinction event now underway, it is time for a 'Nature First' assumption. That means retaining the rich biodiversity of this living world has to come first in our decision-making. Before we are called 'antihuman', let us again point out that society relies on nature to survive. It provides the food, fibre, nutrients, ecosystem processes and spiritual harmony humanity needs to live well on Earth. It is our kin. If we destroy nature, we would leave a devastated world to our descendants and we eventually destroy ourselves. So putting nature first means that we are also putting the ecosystem processes that support our civilization first. At the same time, a 'Nature First' assumption puts ecocentrism, ecological ethics and ecojustice in key focus, maintaining that nature has intrinsic value. The assumption of society should be that we have a duty of care to protect nonhuman nature. Projects that should be controlled under a 'Nature First' assumption are those that strongly degrade nature—increasing overpopulation and overconsumption; burning fossil fuels; clearing forests; large-scale mining; and over-harvesting (and illegal poaching) of life. Where the balance should lie may be indicated by the 'Nature Needs Half' vision, and it will be different for each locality. However, without a 'Nature First' assumption, few degrading activities are likely to be controlled. After all, most have failed to be controlled over the last century of the 'Sole Value' assumption.

However, a 'Nature First' assumption will not come into being *without* the acknowledgment that nonhuman nature deserves respect, acknowledgment of its intrinsic value, ecojustice, ecodemocracy, and acceptance that we have a duty of care towards her. Without this, business-as-usual will continue—as ongoing and accelerating ecocide that makes nature conservation increasingly difficult (perhaps impossible). However, with this acceptance, we can move towards an ongoing dialogue that seeks to retain the beauty and wonder of the living world. Such a dialogue will seek to balance both social and ecological justice so the two operate together in harmony. It will probably always be a work in progress, but one that needs to commence now. A key part of this is getting conservation groups to stand up for ecocentric conservation and the integration of social and ecological justice. Conservation organisations now need to undertake dialogue with the big international conservation groups, as some of them need to re-join ecocentric conservation (see Chap. 7 by DellaSala). Some groups that could take a lead in this dialogue include: The Rewilding Institute; The Center for Biological Diversity; Nature Needs Half;

Half Earth; and the Earth Charter Initiative. Such groups could also enter a dialogue with social justice advocate organisations, such as The Equality Trust and The Network for Social Change, in regard to the need for integrating social and ecological justice, so they operate entwined.

In conclusion, there are key ethical questions in play that society must ponder and resolve. Will society learn from indigenous cultures and their kinship ethics to assist it to live in harmony with the rest of life? Will we extend ethics to all of life and the land? Will we abandon the 'Sole Value' assumption in favour of a new 'Nature First' assumption? Will we care enough to change? We believe that conservation needs to return to being the *voice for all of life* that has no human voice. Conservation should be about caring for this green, living planet we are so lucky to live on—as we have a responsibility to do so. Indeed, we believe the integration of social and ecojustice is essential today for a sustainable future—not just for humanity, but for all of life. This is a great challenge, but one of infinite value for us to work towards. Entwining social and ecological justice is a path we should now travel for us to conserve this planet's diverse and amazing living reality. We conclude with the wisdom of Aldo Leopold (1949: 262) and his Land Ethic:

Examine each question in terms of what is ethically and aesthetically right, as well as what is economically expedient. A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.

References

Abram, D. (2010). Becoming animal: An earthly cosmology. New York: Vintage Books.

Ceballos, G., Ehrlich, A., & Ehrlich, P. (2015). *The annihilation of nature: Human extinction of birds and mammals*. Baltimore: Johns Hopkins University Press.

Crist, E. (2012). Abundant Earth and the population question. In P. Cafaro & E. Crist (Eds.), Life on the Brink: Environmentalists Confront Overpopulation (pp. 141–151). Georgia: University of Georgia Press.

Crist, E., Mora, C., & Engelman, R. (2017). The interaction of human population, food production, and biodiversity protection. *Science*, *356*, 260–264.

Curry, P. (2011). Ecological ethics: An introduction (2nd ed.). Cambridge: Polity Press.

Dinerstein, E., Olson, D., Joshi, A., et al. (2017). An ecoregion-based approach to protecting half the terrestrial realm. *BioScience*, *67*, 534–545.

IPCC. (2018). *Global warming of 1.5* °C. International Panel on Climate Change, see: http://www.ipcc.ch/pdf/special-reports/sr15/sr15_spm_final.pdf.

Jeffers, R. 1924 (1986). Poem 'The Tower Beyond Tragedy'. In J. Hart (Ed.) The Concise Oxford Companion to English Literature. Oxford: Oxford University Press.

Knudtson, P., & Suzuki, D. (1992). Wisdom of the elders. Australia: Allen and Unwin.

Kopnina, H. (2016). Half the earth for people (or more)? Addressing ethical questions in conservation. *Biological Conservation*, 203(2016), 176–185.

Lawrence, D. H. (1968). A Propos of Lady Chatterley's Lover. *Phoenix II* (pp. 487–515). London: Heinemann.

Leopold, A. (1949). A sand country almanac, with essays on conservation from round river. New York: Random House (1970 printing).

Locke, H. (2013). Nature needs half: A necessary and hopeful new agenda for protected areas. *Parks*, *19*, 9–18.

- O'Hanlon, E. (2012). Eyes of the wild: Journeys of transformation with the animal powers. Washington: Earth Books.
- Rees, W. (2008). Toward Sustainability with justice: Are human nature and history on side?. In Soskolne C (Ed) Sustaining Life on Earth: Environmental and Human Health through Global Governance (pp. 81–93). New York: Lexington Books.
- Schopenhauer, A. (1983). The will to live: The selected writings of arthur schopenhauer, In: R. Taylor, New York: Ungar.
- Shoreman-Ouimet, E., & Kopnina, H. (2015). Reconciling ecological and social justice to promote biodiversity conservation. *Biological Conservation*, 184, 320–326.
- Trimble, S. (1994). The scripture of maps, the names of trees. In G. Nabhan & S. Trimble, (Eds.), *The Geography of Childhood: Why Children Need Wild Places*. Boston: Beacon Press.
- Wijkman, A., & Rockstrom, J. (2012). *Bankrupting nature: Denying our planetary boundaries*. London: Routledge.
- Wilkinson, R., & Pickett, K. (2010). *The spirit level: Why equality is better for everyone*. London: Penguin Books.
- Wilson, E. O. (2016). Half-earth: Our planet's fight for life. New York: Liveright/Norton.