

Armstrong, Chris. 2024. *Global justice and the biodiversity crisis: Conservation in a world of inequality*. Oxford University Press. ISBN 9780198853596. £30.00.

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The biodiversity crisis often ends up playing second fiddle to the climate crisis. While there are now many excellent books which explore and espouse normative theories on the (global) justice implications of climate change (Gardiner, 2010; Shue, 2014; Moellendorf, 2014; Blomfield, 2019), comparative works on biodiversity are lacking. Conservation studies and allied fields (not least political ecology) are of course no strangers to thinking about justice (e.g. Martin, 2017); however, Armstrong argues that to date these attempts have been piecemeal – focused on describing injustices within specific contexts, rather than advancing a normative theory of how the burdens of taking conservation action ought to be shared globally. Indeed, Armstrong's *Global justice and the biodiversity crisis* is the first book length contribution that addresses the biodiversity crisis from this angle.

The first chapter develops three arguments for the adoption of a "global justice" framing for understanding the biodiversity crisis. Firstly, global inequality is a driver of biodiversity loss. The *Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services* [IPBES] (2019) has shown evidence that nations with high intersocietal inequality experience greater rates of biodiversity loss (Armstrong, 2024, p. 15). Inequality is also a driver at the international level too – the major cause of biodiversity loss is resource extraction from the global South to support the lifestyles of consumers in the global North (Armstrong, 2024, pp. 15-16). Secondly, the inverse is true – biodiversity loss contributes to global inequality. Biodiversity provides numerous instrumental goods to those in proximity to it: regulation of water, soil health, food, and the well-attested link between access to natural spaces and mental health (Armstrong, 2024, p. 18). Thirdly, Armstrong argues the *conservation* of remaining global biodiversity will entail enormous changes in how humans use and share the Earth.

Armstrong advocates for an egalitarian approach to the challenge of global conservation burden-sharing. Given the opportunity costs of conservation and the large overlap between biodiversity of global poverty, he argues for the adoption of a Contributor Pays Principle (CPP) (Armstrong, 2024, p. 59). The CPP apportions the burden to pay for biodiversity loss to those who are morally responsible for the damages: predominantly the Global North. Armstrong acknowledges, following Shue, that occasionally those who contribute to biodiversity loss have no reasonable alternatives. In these cases, Armstrong argues that a pragmatic Ability to Pay Principle (APP) takes precedence (Armstrong, 2024, p. 62). This principle, as in climate justice, places the burdens of paying for conservation on those who have the capacity to bear them. Practically, identifying who this is might be related to an index of human development, but Armstrong remains agnostic as to the details (Armstrong, 2024, p. 62).

Armstrong is particularly valuable in his discussion of the opportunity costs of setting aside land for conservation and the need to factor these into any compensatory payments. They convincingly note that opportunity cost calculation is not morally neutral, instead it depends upon the unjust baseline which we calculate from. For instance, if compensation is calculated from a baseline of what a smallholder who gives up their farm for a new conservation area could have expected to earn (e.g. a status quo) baseline, then we risk compensating at a level which keeps said smallholder in poverty and maintains global inequality.

Armstrong's response is that we ought to adopt moralized baselines to calculate compensation payments from. Armstrong offers a minimal and maximal interpretation. Minimally he argues compensation ought to be calculated from an anti-poverty baseline. Maximally, he argues that justice demands that compensation be calculated from an egalitarian baseline, that is, what someone would need to be earning to progress toward a world of comparably equitable wellbeing, opportunity, and fulfilment. While Armstrong realizes the enormous challenge of such a maximalist view, this work should be praised for following through normative arguments even when they lead to revisionist conclusions. Armstrong argues that the result of recognizing the intertwined nature of (global) inequality and the biodiversity crisis should be an integrationist political framework and an opportunity to advance social and egalitarian ends simultaneously.

One of the central difficulties with burden-sharing for biodiversity is, unlike the classic climate ethics problem of distributing shares of a global 'emissions budget', the uneven global distribution, and local variation

of biodiversity means conservation efforts must be place-specific. Thus, while some nations might have a strong ability to monetarily compensate others, they cannot assume the burden of giving up greater portions of their own territories for wildlife preservation.

Armstrong discusses this in Chapter Five on "biodiversity offsetting" (Armstrong, 2024, pp.101-105). Particularly valuable is his discussion of the redistributive benefits that biodiversity offsetting (like carbon offsetting before it) has some theoretical potential to achieve – if it provided a means for stimulating North-South capital flows as developers in wealthy nations seek to purchase low-cost land in nature-rich regions in the global South. Armstrong rightly points out we have reasons to doubt that this theoretical mechanism is likely to advance global equality, as in a globally fungible market for offsets we would expect the price should coalesce around the unjust status quo baseline for opportunity costs. Political ecologists should investigate whether this occurs as nascent offsetting schemes mature and come to fruition.

It is a shame that *Global justice* appeared in print before the slew of new best-practice recommendations for offsetting programs that have appeared since Convention on Biological Diversity COP16; including the long awaited IAPB position paper (IAPB, 2024) which rejects global offset markets in favor of "local-for-local" and "like-for-like" offsetting. While this does not mean global offset markets are off the table, it does occasionally feel like Armstrong's discussion is off target as biodiversity offsetting programs are increasingly responding implicitly to their critics on biological fungibility.

Global justice benefits from being a relatively slim volume, suitable as an introductory text, which is still able to lay out its theory and demonstrate its application to pressing issues in biodiversity policy. This does however mean that Armstrong is less able to explore interesting theoretical questions which impact how biodiversity policy is implemented. One area left underexplored beyond summary in Chapter Two is precisely what biodiversity conceptually entails: something which is both contested, and essential to understanding what the proper aims of biodiversity conservation is (MacLaurin & Sterelny, 2009). Additionally, Armstrong focuses on questions of distributive justice at the expense of other aspects of justice. This is not necessarily surprising—distributive justice dominates in almost all fields and given the urgency and severity of the distributive burdens which conservation efforts entail it is easy to see why this was the focus. However, many in environmental justice have criticized the over-emphasis on distributive justice within the discipline at the cost of other aspects (Schlosberg, 2013; Whyte, 2011; Sovacool *et al.*, 2017). While Armstrong does offer some consideration of procedural failings and the appropriate response to historical injustices, these are mostly restricted to the final application Chapter Six on "Half-Earth" conservation proposals and in the Conclusion (Armstrong, 2024, p.137). This leaves us with an incomplete theoretical treatment of these aspects of justice.

While Armstrong is writing in part for an audience of global justice scholars there is much in *Global Justice* of interest to anyone working in political ecology and allied disciplines, especially those focused on global scale issues, including but not limited to: international trade, conservation financing, transboundary governance, and Convention on Biological Diversity international processes. As with any normative theory Armstrong's effort here will certainly not be the last word, but it deserves commendation as a serious effort to understand what justice demands vis-a-vis halting on biodiversity loss. Future work should focus on rectifying the comparative lack of attention given to procedural, corrective, recognitional, and transitional justice considerations (Zimm *et al.*, 2023) within a global justice context, such as by focusing on the kinds of institutions needed to enact an egalitarian global conservation. Likewise, political ecologists may want to explore what applying such a global egalitarian framework for burden-sharing would mean in their case study areas; contributing to an understanding of leverage points needed to enact such changes.

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