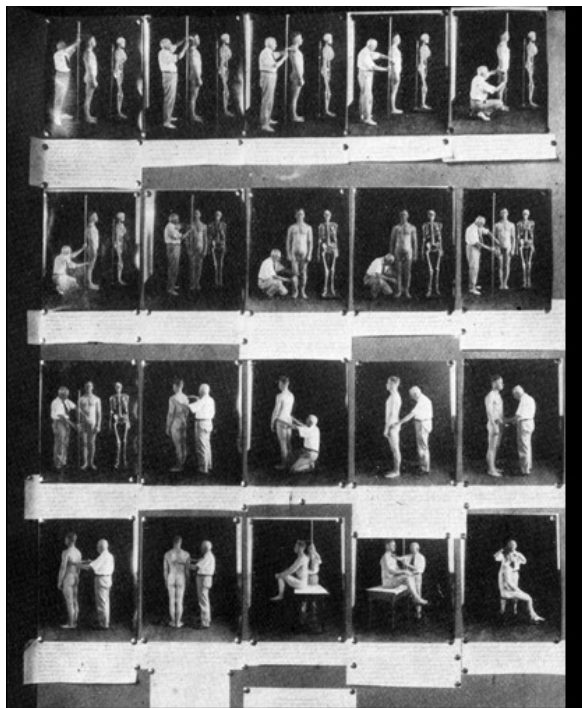


A response to Cafaro, Hansson & Gotmark (2022): Shifting the narrative from overpopulation to overconsumption

by Aalayna Green, Department of Natural Resources & the Environment, Cornell University, and seven colleagues

A [recent paper by Cafaro et al. \(2022\)](#) attributes the decline of global biodiversity to overpopulation and encourages conservationists to “advocate for smaller [human] populations, through improved access to modern contraception and explicit promotion of small families”. In so doing, Cafaro et al. maintain a history of population-reduction solutions which encourages eugenics by recommending the erasure, extermination, and extraction of socially marginalized peoples (see Zacharias, 2021). Simultaneously, their assertions perpetuate discriminatory practices toward historically marginalized communities (e.g., Original Nations or Indigenous groups) who live in areas of conservation concern (e.g., Ancestral Territories). We argue that global biodiversity decline is caused by the rise of the *overconsumption of natural resources for capitalist monetary gain*, particularly attributed to the rich, former colonial powers originating in Western Europe, the United States, and Canada. Shifting the blame from overpopulation to overconsumption more accurately addresses the issue at fault and provides the foundation for a more effective, long-lasting, and ethical biodiversity conservation framework.

In conservation and wildlife biology, *overpopulation* brings to mind actively managing a population until it is reduced to “appropriate” levels. This is hugely problematic when applied to humans (see Stoddard, 1920) and it is likely due to these problematic connotations that it is “now rarely used in the scientific literature”. Despite this, Cafaro et al. uses the term and muddies its definition with overconsumption. A simple arithmetic example shows that if Country A with a population of 10 million people has a per capita consumption rate of 1 unit/person, it is just as “ecologically sustainable” as Country B with a population of 5 million people, with a per capita consumption rate of 2 units/person. The populations of both countries could increase by 5 million and Country A would be *more ecologically sustainable* than Country B, despite five million more people. In short, consumption rate matters more than human population numbers.



Anthropometry demonstrated in an exhibit from a 1921 eugenics conference.

Additionally, Cafaro et al. further argue that, “global biodiversity decline is best understood as growing numbers of people and their rapidly expanding economic support systems crowding out other species.” However, the correlation between increasing human population size and species decline cannot be stated in this context without acknowledging the uneven distribution of consumption globally. Cafaro et al. link human population growth to greenhouse gas emissions, yet overlook the top 10 % of global income earners who are responsible for 40–60 % of global emissions (Nielsen et al., 2021). Furthermore, they do not discuss the geographic variation in ‘ecological footprint’ nor do they address that overconsumption is often not localized in a general context. For instance, sustaining an average modern American’s lifestyle requires ≤ 9.5 ha of land, while the average modern lifestyle of individuals in India or Africa requires ≤ 1.0 ha (Lin et al., 2018). Cafaro et al. further limit their attribution of biodiversity increases to human population decline to one section of the paper (Section 3), thus ignoring deeper, intersecting complexities involving habitat restoration and protection.

The authors attempt to link declines in the number of humans residing in an area to increases in biodiversity, but do not acknowledge the history of violence, harm, and dispossession which undermine the goals of biodiversity conservation and disproportionately impact Indigenous peoples and others whose wellbeing and cultures rely directly on the land and sea. A majority of the most biodiverse areas in the world are protected by Indigenous communities (Fa et al., 2020) yet, they continue to be threatened by colonial influences. Cafaro et al.’s article continues the neocolonial practice of associating land inhabitants as a problem, which can only lead to unethical solutions. It is this sentiment that can be found in the earlier ideologies such as ‘manifest density’ used to justify extreme violence, displacement, and the dispossession of land from Indigenous peoples. At best, the authors are unaware of the problems of mistaking overpopulation for overconsumption, and calling for a reduction of the former and not the latter. At worst, the authors are encouraging eugenics in the erasure, extermination, and extraction of Indigenous and other systemically disadvantaged peoples for the sake of biodiversity conservation.

In summary, Cafaro et al.’s (2022) article raises ethical and human rights concerns that undermine the collective effort of biodiversity conservation and “a just and sustainable future for all”. Global biodiversity decline can instead be described as the loss of biological diversity caused by the rise of human *overconsumption*, largely attributed to former colonial powers of the Global North. By shifting the narrative from *overpopulation* to *overconsumption*, we can embrace our critical responsibility to acknowledge modern conservation’s colonial roots and avoid perpetuating harmful top-down policies regarding human population management that have proven to be both deeply unethical and ineffective for biodiversity conservation in the long term.

References

- Cafaro, P., Hansson, P., Gotmark, F., 2022. Overpopulation is a major cause of biodiversity loss and smaller human populations are necessary to preserve what is left. *Biol. Conserv.* 272, 109646 <https://doi.org/10.1016/j.biocon.2022.109646>.
- Fa, J.E., et al., 2020. Importance of indigenous peoples’ lands for the conservation of intact Forest landscapes. *Front. Ecol. Environ.* 18 (3), 135–140. <https://doi.org/10.1002/fee.2148>.
- Lin, D., et al., 2018. Ecological footprint accounting for countries: updates and results of the National Footprint Accounts, 2012–2018. *Resources* 7 (3), 58. <https://doi.org/10.3390/resources7030058>.
- Nielsen, K.S., Nicholas, K.A., Creutzig, F., Dietz, T., Stern, P.C., 2021. The role of high-socioeconomic-status people in locking in or rapidly reducing energy-driven greenhouse gas emissions. *Nat. Energy* 6, 1011–1016. <https://doi.org/10.1038/s41560-021-00900-y>.
- Stoddard, L., 1920. *The Rising Tide of Color: The Threat Against White World Supremacy*. Charles Scribner’s Sons, New York, NY.
- Zacharias, R.L., 2021. Fewer of whom? Climate-based population policies infringe marginalized people’s reproductive autonomy. *U. Pa. J.L. Soc. Change* 25, 81.