Letter to the Editor

Fewer people would help preserve biodiversity: A response to Hughes et al. (2023)

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“Smaller human populations are neither a necessary nor sufficient condition for biodiversity conservation,” according to Alice Hughes and colleagues. We agree that reducing human numbers is not sufficient for preserving biodiversity; whether it’s necessary depends on how high we set the bar for successful conservation. If we hope to preserve robust populations of most of the world’s remaining wild species and their habitats, the evidence suggests human populations will have to be considerably reduced.

Cafaro et al. (2022) presented extensive evidence that a large and growing population is an important driver of biodiversity loss. A new bibliography of recent studies adds more evidence (Cafaro et al., 2023). But Hughes et al. mischaracterize us in stating: “Cafaro et al. (2022) argue that overpopulation is the major cause of various environmental issues” (our italics). We titled our paper “Overpopulation is a major cause of biodiversity loss” and a whole section explores the relative strength of population and other fundamental drivers. Why not cite us correctly?

Global biodiversity decline is best understood as too many people consuming and producing too much and displacing other species. To reverse this decline, smaller populations should be combined with efforts to rein in per capita economic demands, to decrease total human impacts on the biosphere and leave more habitat and resources for wildlife. Reducing both per capita consumption and human numbers would be most favorable for biodiversity. After all, each person is a consumer and makes some demands on the biosphere.

Instead, Hughes et al. advocate focusing exclusively on reducing per capita consumption and leaving the number of capitas to take care of itself. For instance, “reducing meat consumption is an essential component of addressing habitat loss and degradation” — but not reducing the number of potential meat eaters. “Expansion of fishing pressure is largely from large companies registered in developed countries” — but this pressure is unrelated to the number of seafood consumers in those countries. Hughes et al. are willing to bet other species’ existence on “an agroecological transition in both high and low-income countries to minimize the impacts of agriculture on local biodiversity whilst maintaining food security, which is sustainable regardless of population size” (our italics).

But no agricultural system is sustainable regardless of population size. This makes no more sense than expecting a grazing regime to be sustainable regardless of the number of cows. Studies asking if humanity will be able to feed ourselves in 2100 without seriously damaging the biosphere find this challenge difficult and recognize that larger populations make it even harder. The 2019 IPBES Assessment Report states agricultural expansion, including aquaculture, is a leading cause of biodiversity loss. These agricultural demands are tied to the number of consumers, and conservation biologists need not doubt that humans’ need for food will trump other species’ needs for habitat and essential resources if one conflicts with the other.

Hughes et al. not only mischaracterize empirical issues regarding human numbers and biodiversity loss, but also our societies’ ethical and public policy choices going forward. They seem to suggest conservationists have two choices: either to embrace coercive population policies, or to let “development” solve population growth. But as explained in our paper, the demographic status quo does not bode well for protecting biodiversity, and policies exist that can both enhance human rights and end population growth: above all, providing increased access to modern contraception, and encouraging people to voluntarily choose small families. This will benefit people, especially poor people, as well as other species. Such efforts are needed in both richer and poorer nations. Far from being ethically problematic, humane population policies are essential for creating just and sustainable societies.

Speaking of ethics, Hughes et al. incorrectly cite a paper by Camilo Mora (2014) to support their contention that there is “no scientific evidence” that high human populations drive biodiversity loss. Mora’s conclusion is actually the opposite. In a similar way, they suggest that IPBES (2022) supports population neglect, writing: the “report [on the sustainable use of wild species] notes that a ‘race for profit’ is fueling the collapse of biodiversity, highlighting that urgent cross-sectorial actions are needed to counter these losses, and these [actions] transcend issues of ‘how many people’.” But the phrase “race for profit” is nowhere found in the IPBES report. In fact, its summary for policymakers states: “The sustainability of the use of wild species in the future is likely to face challenges due to climate change, increasing demand and technological advances. … For many practices, demand is linked to demographic
trends and consumption patterns. Growing human populations and consumption will result in greater pressure on wild species (well established) (IPBES, 2022, 30–31). It takes considerable creativity to interpret this to mean that actions and policies to preserve biodiversity can “transcend” the number of people making demands on it.

Declaration of competing interest

The authors declare no conflict of interest involved in the writing or publication of this article.

Data availability

No data was used for the research described in the article.

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.


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