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Conservation biology and the endarkenment

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The following commentary was written in response to an essay published in AMBIO earlier this year; Ehrlich's response was published in AMBIO in September 2014.

Comment to: Dalerum, F. 2014. Identifying the role of conservation biology for solving the environmental crisis. AMBIO 43. Doi: [10.1007/s13280-014-0546-3](https://doi.org/10.1007/s13280-014-0546-3).

Frederik Dalerum (2014) has nicely summarized what many of us consider the basic question of how conservation biologists should allocate their time in trying to deal with the existential threat to human civilization. How much should we devote to our usual activities—to research that may provide better insights into ways to preserve Earth's biodiversity, or to promoting local or regional actions that will slow the rate of population and species extinctions? Alternatively, how much should we focus on communicating with the general public and taking action to move society onto a course that might avoid a collapse; that is, to addressing the underlying causes of the extinction crisis?

My personal answer is straightforward. *All* scientists should be allocating a significant amount of effort to promoting understanding and action to deal with the major drivers of environmental destruction: population growth, overconsumption by the rich, and socio-economic inequity. The scientific community has understood for decades that Earth is becoming increasingly overpopulated, that biodiversity supplies critical ecosystem services to humanity and is disappearing, that sustainable growth is an oxymoron, that civilization must rapidly transition away from the use of fossil fuels, that toxification of the entire Earth has potentially devastating consequences (Cribb 2014), and on and on. Yet despite repeated warnings from the community (e.g., Barnosky and Hadly 2013), and excellent efforts at communication such as those of participants in the *Aldo Leopold Leadership Program*, billions more people are projected to be added in this century to the already-staggering global system, greenhouse gases are being emitted ad lib, an episode of population and species extinction unequalled in 65 million years is underway, the entire planet is being soused by constantly

growing quantities of toxic chemicals, wars over ever-scarcer resources (Klare 2012) are already causing much death and misery and potentially could turn nuclear, and the threat of a civilization-ending epidemic is likely increasing as human numbers, density, and mobility escalate. Furthermore, a pervasive taboo persists against discussing the roles population growth (especially), economic growth among the rich, and social inequities play in driving civilization toward collapse.

When the water in Toledo, Ohio became undrinkable recently, letters to politicians and editors, appearances on local TV, and comments on social media, etc., by scientists and others could have emphasized that demography was connected both to fertilizer run-off into Lake Erie and to warming of the lake's water. They could have commented on the general global problem of the failure of infrastructure (in this case water purification plants) to keep up with population growth and its consequences. No scientist should comment on climate disruption in technical papers or public statements without explaining that more people and more agriculture mean more greenhouse gases in the atmosphere, as does more consumption by the rich. Scientists writing about the problems of feeding a projected 9.7 billion people in 2050 (when several billions are hungry today and need more consumption) are almost all ethically derelict. That is because they fail to inform their readers that relatively inexpensive steps to avoid unwanted children, empower girls and women with education and opportunity, and make modern contraception and safe backup abortion available to all sexually active individuals would reduce the challenge (perhaps to needing to nourish a billion fewer people).

Every scientific paper that discusses schemes for feeding an exploding population, creating habitat corridors, protecting biodiversity hotspots, building sea walls against rising oceans, restricting the manufacture of toxic compounds, increasing solar energy mobilization, and the like is a missed opportunity if it does not include a clear statement that if growth of population and of per capita consumption by the rich continue all those steps will, in the end, be useless.

Conservation biologists especially must help shatter the taboos against pointing to population, consumption, and growthmania as causes of humanity's peril. Consider just overpopulation, which is frequently described as the unmentionable "elephant in the room." The highly immoral, pro-natalist and anti-woman positions of the Catholic hierarchy¹ cannot be directly discussed as such. At most, all that can be stated "politely" is the hope that the new pope may possibly change policies and, among other things, save the lives of the many tens of thousands of women who are now killed annually (Haddad and Nour 2009) by abortions made illegal and dangerous in part by political pressure from sexually disoriented old men. All scientists should be working with the rest of civil society to expose this anti-life behavior for the power play it is (Weisman 2013, p. 130). They should also be using their influence to counter the sexism, racism, and economic inequity that greatly hinder the pursuit of solutions to the "perfect storm" of environmental problems humanity now faces. The trade-offs Dalerum outlines need

¹ Not to be confused with Catholics themselves who, on average, perform reproductively like those of other religions in similar circumstances.

to be kept constantly in view, but my guess is that we conservation biologists so enjoy our usual work that efforts to preserve biodiversity and other resources until humanity achieves sustainability will continue more or less unabated without particular encouragement.

In view of the great recent successes of those promoting the war on science, it is clear that the endarkenment is upon us. To counter this, scientists need to strive to become modern Voltaires. The conservation biology-ecology community needs to take a leading role in mobilizing and informing the environmental movement. Otherwise humanity will likely continue on its business-as-usual trajectory to collapse. To see the growing results of that lethal course, turn on your TV news or travel anywhere. Si monumentum requiris, circumspice.

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