

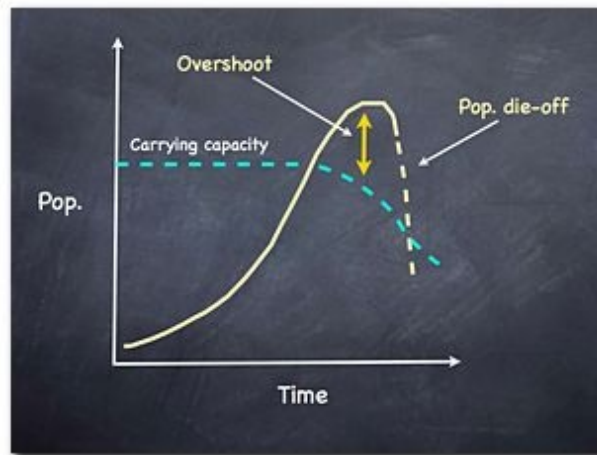


Six steps to “getting” the global ecological crisis

Posted by [Prof. Goose](#) on November 4, 2007 - 10:05am

Topic: [Environment/Sustainability](#)

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This is a guest post by John Feeney, Ph.D. Trained as a psychologist, John is today an environmental writer and activist in Boulder, Colorado. He began investigating environmental issues while fighting destructive residential development in a small Iowa town where he and his family lived for two years. His research pointed inevitably to the interacting roles played by population growth, the drive for economic growth, and our reliance on fossil energy in fueling the ecological crisis we now face. His website is called [Growth Is Madness](#).

Some of us who examine and discuss environmental matters are constantly puzzled and frustrated by the seeming inability of elected officials, environmental organizations, and environmental and political writers to “get” the nature of our ecological plight. Could it be they’re simply unaware of the ecological principles which enable one to understand it?

Since some undoubtedly are getting it, and in light of the warnings in the UN’s latest [report](#) on the state of the global environment, below is a brief list of axioms and observations from population ecology with which everyone should be familiar. Most are taught in introductory level ecology and environmental science classes. They appear sequentially, so the reader can step logically through a progression which should make clear the nub of the global ecological challenge before us...

1. A finite earth can support only a limited number of humans. There is therefore a global “carrying capacity” for humans. A basic [definition of carrying capacity](#) is “The maximum number of people, or individuals of a particular species, that a given part of the environment can maintain indefinitely.”
2. It is an axiom of ecological science that a population which has grown larger than the

carrying capacity of its environment (e.g., the global ecosystem) degrades its environment. It uses resources faster than they are regenerated by that environment, and produces waste faster than the environment can absorb it without being degraded. Some definitions of carrying capacity [include](#) this element of environmental degradation. Such a population is said to be in [“overshoot.”](#)

3. Al Bartlett [sometimes writes](#), “A SELF-EVIDENT TRUTH: If any fraction of the observed global warming can be attributed to the activities of humans, then this constitutes positive proof that the human population, living as we do, has exceeded the carrying capacity of the Earth.” The same can be said of much of the rest of the extensive and growing human-caused ecological degradation we see today, including the breakdown of the web of life indicated by the ongoing [Sixth Extinction](#). It is [symptomatic](#) of having exceeded the earth’s capacity to sustain our current numbers for the long term. It is, in fact, proof that under current conditions we have done so. [1] [2]
4. It’s axiomatic, as well, that a population can [only temporarily](#) overshoot carrying capacity. It will subsequently decline in number, to return to a level at or below carrying capacity. That is, though a population may grow in size until it is too large for existing resources to sustain it, it must subsequently decline.
5. Because it degrades its environment, a population in overshoot erodes existing carrying capacity so that fewer members of that species will be supported by that habitat in the future.
6. Our extraction of nonrenewable resources such as oil and coal has allowed us temporarily to exceed the earth’s carrying capacity for our species. As these supplies are drawn down, our numbers continue to increase, and ecological degradation progresses, the number of humans will, of necessity, come down. Whether we have a hand in voluntarily and humanely bringing them down, or simply let nature manage the whole thing for us, is up to us.

It seems unlikely anyone could fully comprehend the six steps above, and still deny we face a grave, worldwide ecological crisis. But for some, self gain or political ideology tied closely to self-image might be enough to fuel such denial. For others, I hope this little essay is informative.

For an in-depth analysis of the same and related issues try William Catton’s [Overshoot](#).

[1] Obviously, not all environmental degradation is proof of overshoot. An individual example of ecological damage may have nothing to do with a species having exceeded carrying capacity. Those examples, however, which reflect our society-wide ways of living, such as CO2 emissions, overfishing, and habitat destruction, do offer such proof.

[2] For humans, carrying capacity varies somewhat as a function of how we live. Yet no matter how we live, we cannot eliminate carrying capacity constraints. It seems [unlikely](#), for instance, that even a hypothetical complete switch to renewable energy, as essential as it ultimately is, would, in itself, drop humanity back to within the limits of carrying capacity. In a time when groundwater depletion, habitat destruction, and the depletion of other non-energy resources constitute a large portion of our ecological challenge, we would likely remain in overshoot due to our sheer numbers.



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